The Journal of Educational Method

VOLUME III APRIL, 1924 NUMBER 8

EDITORIALLY SPEAKING

PRINCIPALS, TOO?

A considerable number of cities have recently adopted single salary schedules for teachers. The essential feature of such a schedule is that, other things being equal, no discrimination in salary is made between elementary and high school teachers with equal experience. The theory is that teaching younger children is quite as important and difficult as teaching older ones and, if as fully prepared for, should be equally rewarded.

The chief consideration leading to the new schedule is, therefore, the desire to do justice and give to all teachers greater contentment from a sense of fairness and right treatment. But the matter goes much deeper. The pupils are chiefly to be considered. What the authorities seek ultimately is better teachers for the elementary schools. These they hope to have by stimulating present incumbents to further study and by attracting to and holding in the lower grades persons of the finest attainments. In a word, they hope to remove the temptation for their ablest elementary teachers to seek better pay by preparing to teach in the high school.

Though no one apparently has pointed it out, the same line of argument and procedure applies almost as much to the case of elementary school principals. If the tasks of the teachers are equally important, those of their supervisory officers would seem to be so likewise. Conditions in certain respects are, of course, reversed. The larger classes are frequently in the smaller school. There is, too, a less complicated program of studies and a simpler plant and organization in the typical elementary school than in the high school.

These differences tend to disappear. A large modern platoon school makes demands upon the principal little if any smaller than a high school of equal size. Certainly it is entitled to the continued services of the best manager who can be secured. If a person will by special training and study gain an equipment for such work equal to the best in the high school field, he can hardly be denied equal remuneration, custom to the contrary notwithstanding.

Naturally there will be protest. The high school is associated historically with the upper or privileged classes.

It is in origin aristocratic and has been able to hold a place of special favor in a democratic community. Nevertheless there are signs of change. The era of relatively excessive expenditure upon the high school is drawing to a close. Within a twelvemonth we shall hear of cities that have adopted what will be in effect single salary schedules for the principals of their schools.

THE DIRECTION OF CLASSROOM TEACHING IN THE USE OF THE PROJECT[1]

MARION G. CLARK

Supervisor of Upper Elementary Schools, Cleveland Heights, Ohio

THE PROBLEM

New movements in education bring new problems to the supervisor. These movements appear now and again upon the surface of the great body of educational principles, emphasizing now this and now that phase. These ever-shifting points of attraction often fascinate students of education, who forget that each wave is an integral part of the great depth of truth and that each is made colorful for the moment only by the play of light from a certain direction.

The supervisor must ask, "What is the value of this new emphasis? Does it fall upon something which we especially need to have emphasized — something we have been neglecting? How deeply and permanently is it related to the great principles of growth which we call education? If it is permanent and worth-while, what technique of teaching is best adapted to work out the aims and purposes of the movement?"

The coming of the project has brought to every supervisor an experience in attempting to work out with her teachers the solution to such problems.

The task of the supervisor who wishes her teachers to work through the purposeful activities of children lies in two fields: the pedagogical field, where attitudes are established, principles and technique of teaching are developed, and experimentation takes place; and the administrative field, where organization and conditions conducive to purposeful work are provided.

It is difficult to speak or write clearly of these various lines of work, since they must be spoken of as though they were carried out consecutively instead of being interwoven as threads of one great design.

ESTABLISHING ATTITUDES

Obviously, attitudes must be established first. A feeling of confidence will be inspired in the teaching body if every teacher knows, first, that no good teaching will need to be discarded. All

[1] A paper read before the National Conference on Educational Method.

good teaching is based upon children's purposes or upon their intellectual interests. Both are important and both must be recognized. Secondly, if every teacher knows that no procedure need be dropped until the teacher herself is satisfied that she has a more satisfactory procedure to substitute. Thirdly, if every teacher knows that no new, strange "method" is forced upon her, for the essence of the "project method" is the recognition of a child's ability and right to purpose, to plan, to execute, and to evaluate worthwhile activity for himself. Fourthly, if every teacher knows that in all the experiences of the group she is to act as the wisest member.

The spirit of coöperation will be present when teachers realize that the supervisor comes with no consciousness of superior wisdom which it is her mission to dispense. Thoreau once said, "If I knew anyone was coming to me with the conscious design of doing me good, I should run for my life." It is a common human feeling. Teachers must know that here is a professional situation which teachers and supervisors must study together — reading, discussing, and experimenting.

Willingness to adapt and re-adapt procedure to needs of children will result from wise first visits. Each teacher should feel that the supervisor is in the classroom to study with her the environment, caliber, attainments, and interest of her special group in order to determine, with her, some purposeful activities toward which these children may well be directed. Planning conjointly should be the substance of the conference following the visit.

Sometimes it is necessary to break down ideas and prejudices as to what "purposeful activity" means. It was once said that the worst thing that could be said of Herbart was the Herbartians. It is probably as true that the worst that can be said of the "project" is the "projectians." The superficial enthusiast who has seized upon the project as the latest fad in education, without building upon the foundation of principle, has worked much harm. Preconceived ideas that a project means "letting the children do anything they please"; or that it necessarily means dividing the class into groups, each working with a captain; or that handwork must accompany it; or that individual reports before the class are necessary; or that any other set procedure must be followed, are difficult to break down but fatal to really purposeful work if left to hamper it.

STUDYING WITH THE TEACHERS

Assuming that such attitudes have been set up, how proceed to establish principles and work out the technique of teaching? Two methods of *studying with the teachers* have been followed in Cleveland Heights. The first is reading with informal discussion. The teachers have access to the best published material regarding purposeful work: "The Project Method," by Kilpatrick; *How We Think*, by Dewey; "The Dangers and Difficulties of the Project Method," as published in the *Teachers College Record*, September, 1921; *The Limitations of the Project*, by

Charters; "An Experiment in Coöperation," by Hosic, as published in September and October, 1921, numbers of the *Journal of Educational Method; The Motivation of School Work*, by Wilson and Wilson; *The Child and His School*, by Hartman. The best educational journals are in every building.

The second method is the holding of teachers' meetings. We held a series of such meetings in Cleveland Heights during the year 1921–1922. The outline follows:

In a preliminary meeting, we discussed with the teachers such questions as those below. For the sake of brevity in this article, I have outlined the conclusions reached through discussion under the problems planned.

A. What are we teaching for?
   1. Power of self-direction.
   2. Power to live the common life in democracy.
   3. Power to serve a democracy.
      a. At times to lead.
      b. At times to follow.
   4. Power to appreciate the great cultural and ethical values of the world.

The great question is, "How shall these children so live as to grow most and serve most?"

B. What have we to work with?
   1. The child.
   2. The race experience.

C. If purposeful activity is the key which will unlock the rich treasures of race experience for the child, what principles must we follow and what technique must we work out?

After this preliminary meeting the teachers were asked to formulate any questions which might have been stimulated by their reading or by their classroom experiences and which they felt our teachers' meetings should solve. The hundred or more questions which came in formed an interesting problem in grouping and organizing. They varied widely, as the following examples show:

What is a project?

How can we carry out a project in a reasonable length of time?

What is the technique of planning projects?

How should a project be launched?

Will not the brighter children do all the work?

In group work, should the chairman be coached by the teacher before class?

How is the teacher properly to supervise the investigation of each child when each is working along a different line?

Is drill called for by the project method?

How can the teacher instill higher standards in the children when they are given charge?

These and many other questions helped to throw light upon the state of mind of the teachers who were so pluckily facing the complicated problems of the new situation. After considerable thought and study, the following outline for a series of teachers' meetings was evolved from the mass of questions. The complete outline as given was sent out at one time so that all teachers were able to anticipate the whole series and see the problem in the large. More detailed outlines for study were sent out previous to each individual meeting. This is the outline *as used*. Were we able to live over again these meetings in the light of developments and later problems, a more effective outline could certainly be planned.

February 28. Subject:

A. Principles and activities involved in the term, "project."

B. Can a technique of teaching be worked out to cover these principles and activities?

C. Planning a project.

D. The place of the project in a course of study.

March 23. Subject:

A. Launching a project.
   1. Instigating a purpose.
      To what extent may we reasonably expect the children to begin the work themselves?
   2. Planning the procedure.
      To what extent can the children be responsible?

B. Determining the essentials.
   1. When may the teacher present the subject matter? How?
   2. How establish the essentials in the minds of the children?
   3. How the ability of the class should determine the amount and method of enrichment of the work.

April 26. Subject:

A. The influence which the ability of the class and the nature of the project have upon the form of activity chosen.
   1. Study lesson — use of our regular texts.
   2. Reports, individual and group.
   3. Discussions and debates.
   4. Dramatization.
   5. Construction.
   6. Children's judgments and criticisms.

B. What is the place of drill in the scheme of things?
   1. Need drill be neglected in our projects?
   2. Shall we increase the amount of drill toward the end of the semester?

May 25. Subject:

A. Testing results of projects.
   1. Standard tests.
   2. Tests for determining attitudes and powers.
   3. Informational tests.

B. Open forum.

PRINCIPLES UNDERLYING PROJECT WORK

These meetings resulted in the acceptance of the general principle that *purposeful work is the only productive work*. Therefore:

1. Children should purpose their school work.
2. Children should plan the activity by which the work can best be accomplished.
3. They should do as much of the work as possible themselves.
4. They should judge the value and quality of their results and improve in the light of such criticism.
5. The teacher should always act as the wisest member of the group in all these activities; purposing, planning, executing, and judging the work.
6. Not all projects in which children show interest are worth while. None should be permitted which is not.
7. Project work should show as definite subject matter results as any other kind of work and much greater enrichment.
8. Drill plays a part in every project which is not purely one of appreciation.
9. Project work should include those forms of work which have some external expression, such as the construction of a monastery, plays, etc.; those forms which pertain to the solving of intellectual problems; those forms which consist largely of drill and those which consist largely of appreciation.

THE TECHNIQUE OF THE PROJECT

It is easier to accept a principle of teaching than it is to work out a technique by which that principle may be applied. The great difficulties in the way of establishing such a technique have been repeatedly recognized in the literature of the "project." In the *Teachers College Record* for September, 1921, Dr. Kilpatrick wrote:

> The greatest difficulty seems to me to center about our main task, namely, the task of devising a technique appropriate to our point of view. Thoroughgoing differences in outlook demand corresponding differences of procedure. Our different belief as to the varied outcomes inherent in any pupil activity, as to the rich significance or life of these attendant outcomes, the acceptance by the school of at least equal responsibility for these as for the customary objectives, our belief that a guided purposeful activity promises best for attaining the totality of desired outcomes

— these taken together constitute a fairly thoroughgoing departure from the customary outlook. If so, we should expect an appropriately different procedure, based upon the assumptions and aims of the new point of view. Such a procedure appropriately wrought, adequately organized, constitutes what I have called the appropriate technique. Let no one think that I contemplate a mechanically perfect formula. The aim, the value, and the difficulty of our technique are one and the same, that it must contemplate the most unpredictable element known to man, the human will — some would add, in its most unpredictable state, youth. Moreover, if our point of view is ever to be widely adopted, the resulting technique must be so wrought as to be communicable.

The task of working out such a technique might well discourage the faint-hearted. Possibly some would say that it should discourage the prudent. For myself I have, I think, no illusions. Our customary technique of learning from books began practically as soon as Aristotle had reduced extant knowledge to system. Progress in that technique from that day to this has been, it would seem, but moderate. Most people whom I know are critical of it in one or more respects. I hope our success will not be so long delayed, but we must expect an appreciable time and a great deal of experimentation before we succeed. Perhaps our great danger can be located right here: that many will expect an enthusiastic acceptance of the theory to serve as the needed technique. It will not. The efficient and fruitful purposeful activity we seek will not arise at our mere bidding — still less at our bare permission. Many disappointments await any who are so unwisely optimistic. And faith without works will die. Lest this prove unduly discouraging to some, it may be said that we always have the older way to fall back upon. If at any time we cannot secure the kind of purpose we wish, we shall merely find ourselves where our rejecting brothers and sisters have chosen to live.

By discussion in our meetings and by experimentation in the classroom we have endeavored partially to answer certain questions regarding the technique, such as:

I. Problem: How may teachers most effectively *plan* a project?
   Theory: In the meetings several plans were suggested and these are included in the introductory pages of our Plan and Progress Book.
   Experimentation: At least eight varieties of planning are in actual practice among our teachers. These plans are examined by the supervisor with the teachers at any time and suggestions are made.

II. Problem: How may we evaluate the work of the class with the greatest benefit to the progress of the group?
   Theory: The suggestions for evaluating the progress of the work, resulting from teachers' meetings, are also included in the Plan and Progress books.
   Experimentation: Many teachers note at the end of each day, or at the close of a short unit of work, gains made by the children. Some note only what has failed of accomplishment and must be "carried on." Some have not yet reached the place where they feel that any great benefit accrues from this evaluation.

III. Problem: How shall we guide the varying types of activities which the children use in solving their problems?
   Theory: Definite outlines have been sent out to the teachers, based on their best practice, and suggestions regarding study lessons, group and work, individual reports. Suggested steps for dramatization have been demonstrated. Much work on this problem lies ahead.
   Experimentation: Our teachers are working on such problems fearlessly and with great labor. The technique of giving lantern lessons, debating, making graphs and booklets, as well as the activities mentioned above, is being experimented with in our classrooms.

IV. Problem: Where can we obtain sufficient material for project work and what is the best technique for using maps, charts, library and museum materials, pictures, etc.

In theory and in practice these problems are puzzling. The teachers have

done splendid work in meeting each new situation as it arises, but we have not been able as yet to arrive at sufficiently satisfactory conclusions to warrant generalizations.

V. Problem: How shall we determine the amount of drill which each phase of subject matter requires? How may we be certain that we have made bonds permanent and yet avoid the terrific waste of overlearning?

Theory: In the teachers' meetings held in October, 1922, plans were made for a series of local (meaning not standard) tests to be given in fundamentals. Diagnostic results of the tests were to be kept by each child as well as by the teachers. Drilling was to be based upon the individual diagnosis.

Experimentation: Class graphs, group graphs, and individual graphs not only have prevented waste of time in unnecessary drill, but also have stimulated the children to greater effort to master the facts required.

These are but a few of the practical difficulties with which we struggle.

THE "FOLLOW-UP"

With confidence and coöperation established, principles and technique discussed, and such interesting experiments afoot, the greatest need of the teacher is the "follow-up" of the supervisor — the guiding and encouraging of the work as it develops. We have tried to carry this on in many ways.

1. We show an interest in each classroom project as far as possible. These activities sometimes proceed along unexpected lines. During the past week so many interesting things have developed that it has been difficult to keep pace with them. One fifth-grade class which is studying Babylonia secured eight original Babylonian tablets and learned enough about them and about the life of the Babylonians so that they invited all the fifth grades in the city to see the tablets and to hear their discussions. One fourth-grade class sent for me to show me a set of arithmetic problems which they had made themselves from their own experiences, had worked, and now wished to send to the other fourth grades to see whether they could do them, too. Another fourth-grade class has become so much interested in the telephone that they have secured a demonstrator from the telephone company, who is to wire their school auditorium and talk with distant cities. The children are inviting the parents and the science classes from the senior high school to this demonstration.
2. We help plan projects with those teachers who doubt their ability to do so.
3. We "carry on" a project in the classroom for hesitant and doubting teachers.
4. We spread the news of successful projects to lend encouragement and suggestion to others in the group. This is done in many ways:
   a. By teachers' meetings. Last week, the teachers of the fifth grade came together and brought their history projects. To the surprise of many of them, they discovered as the discussion proceeded that no two teachers were using the same problem and activities, though all were fulfilling the requirement of the course of study.
   b. By children's activities. Sometimes children tell other children of their activities. A sixth-grade class constructed a monastery while they were studying the Middle Ages. It was so well done that it was taken to all the other sixth grades and used as a basis for talks given by members of the visiting class.
   c. By exchanging projects. Sometimes classes exchange projects as in the case of the fourth-grade arithmetic project mentioned before.
   d. By keeping parents in touch with the work. Parents are told of our activities by the children, who invite their

fathers and mothers into the classroom frequently, and also by the supervisors in parent-teachers' meetings and conferences.

CHECKING AND TESTING

The criticism that the project fails to teach subject matter or that fundamentals are not given proper attention is sure to be offered in any community. Guarding against that criticism has been one of the most relentless of our duties. It must be done by systematic testing and checking.

First, the teachers are attempting to keep a check on the essentials as they come to light in the work.

1. Groups and individuals who look up material for special reports are expected to note on paper the two or three important things which they wish to make clear to the other children.
2. Children are expected to make such reports without reading details from their notes.
3. They are expected to give reports in their own words.
4. When one report is finished, the teacher helps the class to select those essentials for which all are to be held responsible.
5. The child who gave the report later questions the class on his report.
6. The teacher sees to it that every fact brought out contributes definitely to the solving of their particular problem, or toward the completion of some definite part of the course of study.

Secondly, as each unit of work is completed, a brief test is given by the teacher to determine the results in terms of subject matter, habits and attitudes, and to find out what pupils need further help in such essentials.

Thirdly, standard achievement tests are given from time to time by principals, supervisor, or assistant superintendent.

It has thus far been our experience in most cases that definite subject matter is covered with better success because of the great amount of enrichment given.

SUPPORTING THE PROJECT WORK BY ADMINISTRATION AND ORGANIZATION

We have found that no amount of study or experimentation on the part of the teachers and supervisor can bring favorable results in purposeful work unless the organization and administrative activities are in keeping with purposeful work. Therefore:

1. Classes are so organized that pupils of somewhat the same ability may work together.
2. We are attempting to establish principles of living rather than rules of conduct in our classrooms. Life in a social group demands control of such principles. There are occasions which require silence; others which require alert attention to the opinions or commands of one person; others which require general and informal discussion on the part of a group. Some situations require that each work alone; others that groups work together. Some work is noisy; some work is quiet. We learn to judge by the nature of the work to be done, by the character of the social group, and by the materials to be used, what our conduct should be at any given time. The school soon furnishes every one of these varied situations and teachers try permanently to establish certain bonds between certain situations and certain lines of conduct.
3. We have reorganized the periodical reports to parents so that such reports emphasize those phases of education which we have long professed to believe important. We have given citizenship, methods of study, and health places coördinate with the place given to achievement in subject matter. We wish the parents to feel that it is more important that their children

have in mind clearly defined problems and know how to go to work intelligently to solve them than that they have learned certain facts imposed upon them by a school curriculum.

4. We have abandoned daily plan sheets so that teachers may plan their work in large units. A required form for planning projects is detrimental to purposeful work, but several suggested types of planning have been given to the teachers which, we believe, are proving helpful to them.
5. We are attempting a flexible curriculum which requires a certain amount of work to be covered within the year but does not stipulate in what order nor during what particular month any phase of it should be covered—a curriculum not organized by, but suitable to, projects of many kinds.
6. We are attempting gradually to provide furniture and equipment which will make the natural activities of children possible in the schoolroom. Small individual tables, chairs, and lockers have been provided in the primary schools. In the elementary schools, we are equipping rooms for history and geography with long library tables and chairs around which six pupils work at one time.
7. We are very fortunate in having an organization of the Cleveland Heights Public Library which places an unusually complete reference library, based upon the public school courses of study, in every school. The coöperation of this library and of the Art Museum of Cleveland affords us inestimable aid.

But, everything considered, we still have much to do. The next step is probably to work further on the technique of teaching individual subjects, and of guiding the great variety of activities which children use in solving their problems. This is a work for a lifetime — and beyond that the field of work to be done lies limitless.

THE RELIABILITY OF MEASUREMENTS IN SPELLING

R. L. MORTON
Ohio University, Athens, Ohio

An attempt was made in the study here reported to test the accuracy with which the difficulty of a sampling of words from the Ayres Spelling Scale has been determined and, consequently, the reliability of spelling measurements made in terms of this scale. The study was an outgrowth of a previous study[1] pertaining to the relative validity of timed-sentence and column tests in spelling. For that study three tests of twenty-five words each were made up from the Ayres Scale. They were designated Test A, Test B, and Test C. Tests A and C were column tests. Test B was a timed-sentence test. The three tests, with the instructions which accompanied them, follow.

SPELLING TESTS FOR SIXTH-GRADE PUPILS

INSTRUCTIONS

The three tests should be given in succession to a group of pupils. All sixth-grade pupils in the system should be tested on the same day, if possible, or, if this is impossible, on two successive days.

[1] Morton, R. L., "The Validity of Timed-Sentence and Column Tests in Spelling." *Journal of Educational Research*, Vol. V, May, 1922, pp. 444-447.

TEST A

Say to the pupils, "I have here a list of words which I want you to spell. You will need a large sheet of paper and a pencil or pen. Better have an extra pencil within reach, so that if you break one you will not be delayed." Pause until all are ready. Then say, "Write your name at the top of the sheet. Number your words down the left-hand side, 1 to 25. (Pause.) I shall pronounce each word twice. I shall not use the words in sentences nor tell you what they mean, so do not ask questions. Take time to dot your *i's* and cross your *t's*. All ready!"

The list follows:

1. lose
2. machine
3. improvement
4. assist
5. organize
6. decide
7. wreck
8. busy
9. particular
10. therefore
11. invitation
12. accident
13. success
14. different
15. believe
16. opinion
17. celebration
18. minute
19. forenoon
20. avenue
21. total
22. supply
23. accept
24. official
25. complete

TEST B

"Now, turn the sheet over and use the other side. I have some sentences here which I want you to write as I dictate them. I am going to dictate them rather rapidly, possibly more rapidly than some of you can write. If you have not finished writing one sentence when I begin to dictate another, I want you to leave it and begin on the new sentence. If there are any words you cannot spell, you may omit them. Take time to dot your *i's* and cross your *t's*. If you have any question about what you are to do, ask it now, because you cannot ask questions after I begin to dictate."[1]

The sentences follow:

60 *Christmas* came on *Wednesday* last year.
32 *Really* you *ought* to *refer* the *argument* to your teacher.
17 His *condition* is *serious* today.
43 *Education* is for the *common* people.
12 They will *arrive* by *automobile tomorrow* night.
51 *Already* the *theater* is showing *motion pictures*.
32 He will *entertain* a *visitor* next week.
3 I am *often* in *doubt* about my lesson.
31 The *recent conference* was a *pleasant* one.
5 The *general purpose* is good.

When the second hand reaches 28, stop the writing.

TEST C

"Now, turn the sheet over again. I want you to write another list of words beside the list which you have already written. I shall pronounce each word twice, as I did before. Remember to take time to dot your *i's* and cross your *t's* and to ask no questions."

The list follows:

1. combination
2. neighbor
3. difference
4. examination
5. volume
6. circular
7. article
8. increase
9. neither
10. marriage
11. estimate
12. impossible
13. treasure
14. director
15. local
16. system
17. associate
18. political
19. attention
20. service
21. government
22. witness
23. national
24. business
25. convention

The three tests were given in twenty-two Ohio cities to all sixth-grade pupils, 2863 in all. One thousand and seven of these sixth-grade pupils (those involved in the first study) took the tests in the order given above. For the remaining 1856, the order was reversed; that is, Test C was given first and Test A last. In all other respects the procedure was uniform.

Table I gives for each of the twenty-two cities the number of pupils taking the tests and the mean scores.

It will be seen that the mean scores for the entire group of 2863 pupils are 62.4 in Test A and 58.0 in Test C. The difference, 4.4, is greater than one-

[1] Monroe, Walter S., *Measuring the Results of Teaching*. Boston: Houghton Mifflin Co., 1918, p. 185.

fourth of a year's progress. Furthermore, in sixteen of the twenty-two cities, higher scores are made on Test A. In one there is no difference and in five Test C was found to be the easier. It should be noted also that the total number of pupils tested in the five cities doing better on Test C is only 351.

TABLE I—MEAN SCORES

City No.	No. Pupils	Scores	
		Test A	Test C
I	100	66	61
II	330	54	50
III	107	70	70
IV	275	61	52
V	147	51	46
VI	220	67	59
VII	116	70	62
VIII	72	79	77
IX	30	63	66
X	217	67	62
XI	105	55	56
XII	149	64	70
XIII	129	54	48
XIV	41	78	75
XV	213	76	73
XVI	252	53	44
XVII	68	52	51
XVIII	48	60	55
XIX	104	57	50
XX	73	80	77
XXI	35	62	64
XXII	32	68	77
Total	2863	62.4	58.0

If these scores are typical of conditions in Ohio schools, the Ayres standards are too high for this state, or Ohio pupils spell more poorly than do pupils in general in the United States. The 1007 tested in the first study took the tests on the second and third days of December, 1920. The remaining 1856 were tested on the tenth and eleventh days of February, 1921. Our scores, taken as a group, then, may be said to be typical of mid-year performance. But the average of the mean scores of the two tests is 60. The Ayres *fifth-grade* standard for these lists is 58. These pupils are, then, practically a year behind the Ayres standards.

The data of Table I indicate what has been pointed out before but repeatedly ignored or forgotten, namely, that the difficulty of a list of spelling words is not constant but varies greatly from community to community. This is shown not only by the great variation of mean scores in the table, ranging from 51 to 80 for Test A and from 44 to 77 for Test C, but also by the fact that the two lists are not equally difficult for the pupils of most of these communities. They are exactly equally difficult for the pupils of city III, but Test A is so much easier than Test C for the pupils of city XVI that they score on the average nine points higher on it, while the pupils of city XXII find Test A so much harder than Test C that they average nine points lower.

Viewed in the light of the uses which are being made of this scale, these differences are significant. It is a common practice in Ohio to survey the spelling abilities of pupils in city or county school systems one, two, or three times per year, using lists of twenty or twenty-five words from the Ayres Scale. The ease with which fictitious results, favorable or unfavorable to the school system, may be secured is apparent. Had the superintendent of city VI, for example, used Test C in the fall and Test A in the spring, the gains would have delighted his heart; but had he reversed the order,

TABLE II—WORD DIFFICULTIES COMPARED WITH AYRES STANDARDS

No.	Word	Misspellings	Per Cent Right	Ayres	Columns		Difference
					Ayres	Ohio	
1	lose	1331	54	79	R	V	−4
2	machine	618	78	79	R	R	0
3	improvement	661	77	73	S	R	1
4	assist	1100	62	73	S	U	−2
5	organize	1559	46	66	T	W	−3
6	decide	1217	57	66	T	U	−1
7	wreck	956	67	79	R	T	−2
8	busy	640	78	79	R	R	0
9	particular	1169	59	73	S	U	−2
10	therefore	813	72	73	S	S	0
11	invitation	1564	45	66	T	W	−3
12	accident	1238	57	66	T	U	−1
13	success	937	67	79	R	T	−2
14	different	920	68	79	R	T	−2
15	believe	993	65	73	S	T	−1
16	opinion	1389	51	73	S	V	−3
17	celebration	1555	46	66	T	W	−3
18	minute	839	71	66	T	S	1
19	forenoon	945	67	79	R	T	−2
20	avenue	1043	64	79	R	T	−2
21	total	656	77	73	S	R	1
22	supply	957	67	73	S	T	−1
23	accept	1067	63	66	T	T	0
24	official	1836	36	66	T	X	−4
25	complete	979	66	79	R	T	−2
26	combination	1428	50	79	R	V	−4
27	neighbor	954	67	79	R	T	−2
28	difference	905	68	73	S	T	−1
29	examination	1486	48	73	S	V	−3
30	volume	1394	51	66	T	V	−2
31	circular	1336	53	66	T	V	−2
32	article	1505	47	79	R	V	−4
33	increase	903	68	79	R	T	−2
34	neither	1119	61	73	S	U	−2
35	marriage	1033	64	73	S	T	−1
36	estimate	1654	42	66	T	W	−3
37	impossible	1478	48	66	T	V	−2
38	treasure	779	73	79	R	S	−1
39	director	987	66	79	R	T	−2
40	local	783	73	73	S	S	0
41	system	1261	56	73	S	U	−2
42	associate	2106	26	66	T	Y	−5
43	political	1378	52	66	T	V	−2
44	attention	886	69	79	R	T	−2
45	service	943	67	79	R	T	−2
46	government	1411	51	73	S	V	−3
47	witness	1069	63	73	S	T	−1
48	national	1182	59	66	T	U	−1
49	business	1268	56	66	T	U	−1
50	convention	793	72	79	R	S	−1

it would probably have been necessary for him to spend an evening justifying his continued retention in the city on other grounds than the increased instructional efficiency of his teachers.

The frequency with which each of the fifty words was misspelled was counted and the percentage of the 2863 pupils spelling the word correctly was computed. Table II contains the results. The table is to be read thus: The word "lose" was misspelled by 1331 of the 2863 sixth-grade pupils. The percentage spelling the word correctly is 54. The Ayres standard for this word is 79, which means that it is located in column R. Our data assign it to column V. It is, then, moved down four steps and this fact is indicated by a negative 4 in the last column of the table. The first twenty-five words of the list will be recognized as the words of Test A; the remainder are those of Test C.

The last column of Table II is summarized in Table III. Three of the fifty words, six per cent, are easier, according to our data, than the Ayres classification would indicate. For five, the difficulty remains unchanged. Eleven are one step harder, nineteen two steps harder, etc. The median displacement is −1.8 steps. The mean is also −1.8 steps.

TABLE III—SUMMARY

	Steps Displacement						
	1	0	−1	−2	−3	−4	−5
Number	3	5	11	19	7	4	1
Per Cent	6	10	22	38	14	8	2

These comparisons at once call into question the relative reliability of our norms for these words and the norms established by Ayres. Ayres speaks of 1,400,000 spellings secured from 70,000 children in 84 cities.[1] But these 1,400,000 spellings were equally divided among 1000 words. This means 1400 spellings for each word. These 1400 spellings, furthermore, were divided among seven grades, meaning only 200 spellings for each word in each grade, on the average. We have 2863 spellings for each of these fifty words, for the one grade concerned.

Possible dangers arising out of the use of the Ayres Scale may be emphasized by taking an extreme case. Consider these two lists of words:

List W	List X
1. associate	1. accept
2. lose	2. machine
3. official	3. national
4. combination	4. busy
5. article	5. treasure
6. examination	6. improvement
7. estimate	7. minute
8. government	8. total
9. opinion	9. therefore
10. invitation	10. decide

These lists are, according to the Ayres Scale, exactly equal in difficulty, for each contains three words from column R, three from column S, and four from Column T. The theoretical standard score for each list is 72% for sixth-grade pupils. The mean score for our pupils for List W was 45% and for List X, 70.5%. The difference, 25.5%, is equivalent to the amount of improvement attained in a year and a half. according to the Ayres Scale.

Another comparison, showing the

[1] Ayres, Leonard P., *A Measuring Scale for Ability in Spelling.* New York: Russell Sage Foundation, 1915, p. 22.

TABLE IV

Column	No. Words	Range	Mean Scores		Difference
			Hardest	Easiest	
R	18	47–78	61	71	10
S	16	48–77	56	70	14
T	16	26–71	42	58	16

wide range of difficulty of words in the same column, will be made. Eighteen of the fifty words in Table II were taken from column R of the Ayres Scale, sixteen from column S, and sixteen from column T. Each of the three lists (columns R, S, and T) was arranged in order of difficulty according to our data and the mean scores made on the harder and easier halves of each list were computed. Table IV presents the facts. Of the eighteen words from column R, for example, the hardest was spelled by 47% of our pupils and the easiest by 78%. The mean score made on the nine hardest words was 61 and on the nine easiest, 71, a difference of 10% in the two halves of the list. The corresponding differences for the words from columns S and T, it will be noted, are 14% and 16%.

If the Ayres Scale contains the thousand commonest words, it should agree, fairly closely, with the results of other studies of the frequency of word occurrences. The most elaborate of these is that by Thorndike.[1] The words of the Ayres list were looked up in Thorndike's Word Book. Table V shows the results of the comparison. According to Thorndike, 673 words of the Ayres list occur in the first thousand, 181 in the second thousand, 70 in the third thousand, 27 in the fourth, 18 in the fifth, 8 in the sixth, 3 in the seventh, while 20 are unclassified. The 20 which are unclassified are derived forms which Thorndike does not list separately. They are, *beginning, carried, cities, colonies, cordially, died, driven, earliest, especially, folks, getting, nearly, probably, respectfully, running, says, sincerely, sometimes, stopped,* and *truly.*

The 27 words which Thorndike lists in the fourth thousand are: *aboard, accident, anyway, arrest, association, career, circular, complaint, conference, consideration, convention, decision, director, entitle, estimate, extra, forenoon, improvement, maybe, omit, organize, police,*

TABLE V—THORNDIKE'S DETERMINATION OF THE FREQUENCY OF OCCURRENCE OF AYRES' 1000 WORDS

Thousands	1	2	3	4	5	6	7	?	Total
Number	673	181	70	27	18	8	3	20	1000

[1] Thorndike, Edward L., *The Teacher's Word Book.* New York: Teachers College, Columbia University, 1921.

political, statement, testimony, victim, and *visitor.* The 18 which he lists in the fifth thousand are: *agreement, appreciate, arrangement, athletic, auto, celebration, discussion, distribute, illustrate, imprison, income, jail, ledge, objection, organization, primary, reference,* and *unable.* The eight listed in the sixth thousand are: *allege, convict, enjoy, investigate, preliminary, publication, responsible,* and *session.* The three listed in the seventh thousand are: *elaborate, emergency,* and *inspect.*

Since only 673 words of the Ayres list are found in Thorndike's first thousand, Thorndike gives 327 words in his first thousand which are not to be found in the Ayres Scale. Of these, 59 are so common that they are to be found in the first 500, according to Thorndike. They are: *apple, arm, bank, being, bird, bread, color, corn, cross, die, draw, drink, drive, drop, ear, earth, egg, fast, fear, floor, fly, food, fresh, garden, given, green, grow, hair, heavy, hill, hundred, king, laugh, left, lie, matter, milk, plain, quick, rich, rock, roll, save, silver, sing, sleep, soldier, sound, step, strong, sun, sweet, thousand, till, voice, wall, wide, window,* and *wood.* Space prohibits our listing the remainder which occur in the second 500 of the Thorndike list.

One might suspect that the words of infrequent occurrence in the Ayres Scale, for example, those which Thorndike lists in his sixth and seventh thousands, would be more difficult for children to spell than words to be found in the same columns of the Ayres Scale but of much more common occurrence. A limited experiment, however, did not show this to be the case to a significant degree. The following lists were prepared and given as tests to 100 pupils in grades VI, VII, and VIII of the Ohio University Training School.

List A	List B
divide	elaborate
separate	emergency
tire	inspect
firm	convict
often	investigate
immediate	preliminary
manner	publication
receive	responsible
height	session
judgment	allege

List A contains eight words appearing in Thorndike's first thousand and two, *immediate* and *judgment,* found in his second thousand. List B includes seven words found in his sixth thousand and three, *elaborate, emergency,* and *inspect,* which he locates in the seventh thousand. The two lists are equal in difficulty, according to the Ayres Scale, the standards for grades VI, VII, and VIII being 59%, 72%, and 82%.

Table VI shows the results. For the sixth grade List A was distinctly easier, but the eighth grade found List B easier. There was little difference in the seventh grade.

TABLE VI—MEAN SCORES, LISTS A AND B

	Grades			
	6	7	8	Total
List A	71	67	75	71
List B	59	64	82	69

The fifty words included in our experiment were also looked up in Ashbaugh's Iowa Spelling Scales.[1] Forty-

[1] Ashbaugh, Ernest J., *Iowa Spelling Scale.* Iowa City, Iowa: University of Iowa, 1919.

TABLE VII—A COMPARISON OF THE OHIO DATA AND THE AYRES AND IOWA SCALES

Lists	Steps Displacement						
	0	1	2	3	4	5	Total
Ayres and Iowa-2	18	15	6	2	1	1	43
Ayres and Iowa-3	18	10	9	4	2		43
Ayres and Ohio	5	14	19	7	4	1	50
Iowa-2 and Iowa-3	21	18	3		1		43
Iowa-2 and Ohio	5	12	22	3	1		43
Iowa-3 and Ohio	4	12	20	7			43

three of the fifty words were found to be included in the Anderson list of 2977 words. Table VII shows the results of six comparisons. The Iowa Spelling Scales are three in number. The first is intended for grades II, III, and IV; the second for grades IV, V, and VI; and the third for grades VI, VII, and VIII. Inasmuch as our experiment had to do with the sixth grade, the second and third of these scales were used.

Comparing the Ayres Scale with the Iowa-2 Scale (for grades IV, V, and VI), it is seen that 18 of the 43 words are classified in the same columns as regards their difficulty for sixth-grade pupils, 15 are displaced one scale step, 6, two steps, etc. The second line of the table shows a similar comparison between the Ayres Scale and the Iowa-3 Scale (for grades VI, VII, and VIII). The third line of the table is derived from Table III. The fourth line of the table reveals the interesting fact that only 21 of these 43 words are given the same difficulty ratings for sixth-grade pupils in the two Iowa Scales. The fifth and sixth lines of the table indicate the results of comparisons between the Iowa Scales and the Ohio data for the 43 words concerned.

SUMMARY AND CONCLUSIONS

1. If the grade standards of the Ayres Scale are correctly determined, Ohio sixth-grade pupils probably spell more poorly than do sixth-grade pupils in the country as a whole.

2. Spelling difficulties of words in the Ayres Scale do not seem to be correctly determined. The error on most of them is probably slight but on some, as *associate*, *lose*, *official*, *combination*, and *article*, it seems to be as much as four or more steps on the Ayres Scale.

3. Due to local variations in word difficulties and the incorrect placing of words in the scale, seriously erroneous conclusions may be drawn from spelling tests as to the level of ability which a class has attained and the progress made between tests.

4. There are probably hundreds of words in the Ayres Scale which occur less frequently in writing than do many others which have not been included.

THE PREPARATION OF TEACHERS AND SUPERVISORS OF HEALTH EDUCATION[1]

THOMAS D. WOOD, M. D.

Advisor in Health Education, Teachers College, Columbia University

The elements recognized as essential in the preparation of teachers and supervisors of Health Education should be determined by the scope and content of Health Education and by the factors directly and indirectly involved in this process.

Health Education is the sum of the experiences, in school and elsewhere, which favorably influence habits, attitudes, and knowledge related to individual and community health.

Health Education is in principle, and should be in practice, an integral part of the comprehensive program of education. It is dependent upon all the rest of the educational process. The teacher and supervisor of Health Education should have clear understanding and appreciation of the principles of education in general so that Health Education may be understood and directed in relation to the whole, of which it is an inseparable and essential part.

The teaching of health requires the best of the modern and approved methods of instruction recognized in general by educational authorities; beyond this, special adaptation of materials and methods are desirable and necessary for successful teaching in the distinctive field of health. The most thorough training available in psychology, pedagogy, and allied subjects is of fundamental consequence in the education of both teacher and supervisor of this subject.

Health Education depends for accuracy, reliability, and final efficiency upon a wide range of the fundamental sciences. The simplest, clearest, and sometimes the most elemental precepts relating to health require for their interpretation and convincing presentation a nice understanding of the basic facts and principles. It is of great importance that the supervisor in this field should be well grounded in the essentials of physics, chemistry, biology, bacteriology, anatomy, physiology, hygiene, and nutrition. Every teacher of health is greatly helped by as much familiarity with the subjects mentioned as circumstances may permit.

Health Education depends upon experiences out of school as well as in school life. Health Education involves twenty-four hours a day, seven days in the week, fifty-two weeks in the year through all the years in succession; and efforts in health teaching in the school will fail of much of their practical success unless they are intelligently, tactfully, and successfully articulated with the related experiences which affect the child's life in the home and in other parts of the community away from the school.

Again, the attainment of the objectives in Health Education, in health

[1] Given at the International Health Education Conference, San Francisco.

habits, attitudes, and knowledge will depend in an important part upon the provisions made for other health values in the school. The teacher and supervisor must have adequate knowledge, and practical skill and efficiency in their share of the supervision and care of the children's health; in maintenance of a healthful school environment; in contribution to, or control of, a hygienic school administration; in a rich and abundant program of rational physical education activities; in attainment of standards and practices of health among teachers corresponding to or surpassing those set up for the pupils. It will be apparent, then, that Health Education involves a definite range and content of ideas and conduct, and is dependent upon a variety of important and closely related factors.

The personality of the teacher and supervisor of Health Education is of very great importance in this field of teaching, as pupils and students of all ages are peculiarly responsive to the influence and example of their teachers in all phases of instruction and associations affecting health. It is desirable that the teacher and supervisor of health education should be in the best possible state of health; in truth, should exemplify in person and in conduct a fine quality of health of body, mind, and character so that in the highest degree the direct and the more subtle, valuable influences of personal association of teacher with students may be assured. However, much more important than the robustness and attractiveness of physical personality should be esteemed the fine spirit of devotion and enthusiasm for the health of others and the intelligent consistent health conduct of many inspiring teachers and leaders of limited physical resources and endurance. These illustrate in impressive manner the superiority of mind over matter, or, even better, the manifestation of a splendid soul in a delicate frame which should be estimated in qualitative and spiritual rather than in quantitative and physical values. The exceptional, the very rare, person who is favored by gift and accomplishment with all the desirable qualifications already briefly mentioned, should appreciate that the social obligations and responsibilities are even greater than the personal grace and fortune of such possessions.

CONCLUSIONS

Both teachers and supervisors of Health Education should be, in personal, social, and professional conduct, wholeheartedly and whole-mindedly devoted to the physical, mental, and character health of children and youth. They should present a stimulating and healthful example for their students and fellow teachers in thinking, in attitudes and conduct affecting health, personal and social. By instruction and suggestion they should be able to influence the students to participate constructively and progressively in a life of health, of helpfulness, and of the highest satisfaction.

Beyond these fundamental qualities it is of great importance that *supervisors* of Health Education should possess as many as possible of the following:

1. Broad cultural and general education with graduation at least from a teacher-training

institution and, when possible, with the addition of graduate study in some university providing satisfactory professional training with advanced study in the field of Health Education.

2. Experience in teaching health as a valuable background and preparation for supervision. If the supervisor in this field has been fortunate enough to teach other subjects than hygiene under competent criticism, this auxiliary teaching experience may prove of very great advantage.
3. Thorough grounding in the fundamentals of:
   a. General educational principles and methods.
   b. Psychological and pedagogical principles and methods in special adaptation to the field of Health Education.
   c. Natural, biological, and social sciences, with as extensive knowledge as possible of sanitation, public health, hygiene, nutrition, and allied subjects.
   d. Skill in observing, criticizing, and guiding acceptably teachers under supervision; tact in combining successfully a minimum of adverse criticism with a maximum of constructive stimulation and help.

The teacher of Health Education may with great advantage possess:

1. As large an amount as possible of the desirable elements and training previously stated as important for the supervisor.
2. Ability to accept criticism and supervision with grace and skill in recognizing one's own limitations and in manifesting not only willingness but desire to seek advice wherever and whenever this is available.
3. Appreciation of the fact that the more limited is the general and special training of the teacher for the work of Health Education, the more necessary and advantageous are supervision and guidance wherever and whenever these may be found.
4. Practical desire and effort to improve, as rapidly as circumstances may permit, one's general and special preparation for Health Education.

No teacher who has the indispensable and fundamental conviction regarding the importance and worth of Health Education and a sincere desire to participate in this work of health teaching of children should decline the chance to teach health or be refused or discouraged in relation to such opportunities in this field because of lack of professional training for Health Education, or because of limitations in general education or professional training for teaching. The teacher, then, who has (1) a sincere conviction with reference to the importance of Health Education, (2) a genuine desire to participate in Health Education, (3) a sincere desire to learn whenever and wherever there is opportunity to learn, and (4) a willingness to seek help and to receive supervision and guidance when reasonably given, should be encouraged to go ahead and do the best which he or she is capable of doing in the health field.

THE EUROPEAN WORK SCHOOL

P. H. PEARSON

Formerly of U. S. Bureau of Education, Washington, D. C.

In teaching practice the old method in better adaptation is likely to be more useful than the method that claims to be new. The work school, which is at present taking stock of itself in a way that looks promising, is not new. In Switzerland and Central Europe its principles have been recognized in theory and to some extent in practice for generations past. In the early part of the nineteenth century Froebel outlined its scope and proclaimed its generous conceptions, gaining for its principles, however, less following at home than he did abroad. These principles have entered as a specific practice or as a powerful influence in the schools of France, Switzerland, Canada, and Germany. In the United States the same principles have been fully set forth by the American educator, John Dewey.

Since the World War all parties in Central Europe — political and pedagogical — have espoused the work school. The Socialists hail it as the medium through which the young may be trained in community solidarity, the conservatives as the means of training for industrial recovery. Another class — and its members are numerous in Europe — turns to the idea of work which here is placed in the forefront as the road out of economic distress and also as an escape from the despondency of defeat. Political agreement in Germany on the work school principles reached embodiment in Article 148 of the new constitution, whereby the several states of the Republic were required to place work instruction on their school programs as an obligatory subject.

The political people have done their part and now the educators are taking hold, first to discover what work instruction is by this time, and then to shape it into programs that can be carried out.

To line up for a moment with the definition-makers, we can say that both the history and the present trend of the work school insist on individual activity merging physical work with intellectual and moral training. The traditional book school stresses knowing: it uses words and print; the subject matter is divided into class subjects; the pupil is passive and receptive; the teacher participates as authority. The work school stresses doing: the pupil's brain devises plans; the pupil's hands carry them out; the school subjects are made to supplement each other; the subject matter is taken from life as it is experienced; the pupils may work together on group projects; the teacher participates by helping as help is needed.

The post-war renaissance of the work school conception will shape its programs in accordance with the progress educational science is making. During his first six years a child is working his

way from his own narrow circumscriptions out into the world about him. Among the drifts that then develop is that toward discovery and exploration on his own initiative. Here the work school meets his impulses in such a way that the child himself may taste the joy of discovery. To this end he is brought in touch with his environs for experience and performance. Similarly the work school embodies opportunities for the creative and constructive impulses which educational science informs us are also strong in the child. He is permitted to handle the material, to make the new thing he would like to make, and to find an outlet in speech or writing for the impression he has received. For the early years there is sand and clay, paper, wood, crayon, cardboard, mosses, twigs and leaves, to be made into something that the child's fancy has conceived or as the teacher or the book directs. Here, too, enters the educational significance of the joy a child feels in the thing he has made, the thing into which he has put energy and endeavor.

Lessons of a more receptive or passive character alternate with the school garden hours or with constructive schemes in which the hand and the eye are active. The trips and field walks are as much required as history and language. Excursion arrangements are always made to include games and play — in the summer on the roads, in the autum in the fields or in the woods.

The programs of these "hikes" follow the seasons. The winter months are given to visits in shops and factories; the spring months, to the homestead; the summer and autumn, to orchards and forests. School hikes of this kind have often been described, especially the incidents, the games, and the lunch. The following rough notes show what else happens under a work school program. These memoranda are made from directly observing a thirteen-year-old pupil studying with others of her class in a clover field:

> The pupil carefully separates the entangled clover stalks and decides for the study of a healthy specimen growing by itself. With both hands she explores the place where the root branches; follows with hands and fingers the sprouts tangled among the rest, chances to see the shell of a snail; picks it up and examines it, then brings it to her teacher and asks about its name. Places the snail in the plant case; resumes her interrupted work; carefully removes the soil from near the roots of the clover. Tries without success to pull out the stock; asks another girl for the spade; unskillfully digs up the plant.
>
> Then she disentangles the mass of roots; traces the tap root and sprouts, then writes the following on her pad: "Many small roots on stem under surface, not at all deep; stick very firmly to the earth. Among the roots are also the roots of other plants; no tap root like that of the dandelion." Proceeds to measure the length of a sprout, then writes: "Long sprout, 8 inches." Sketches the sprout and leaf. At this moment she is interrupted by another pupil to help count the leaves of two buds. Guesses that there are 30; counts 62 and 53; surprised at the discrepancy. Gives her partner the figures and then resumes the sketch.

A school inspector in France, E. Malard, directs how to introduce work school methods. A special room is not indispensable except for agricultural or domestic science sections and then only for the intermediate courses. Special material is not necessary except for purposes of modeling. The

resources at hand or within reach are always more varied than one would think. Paper, crayon, paste, cardboard, are found everywhere. The principal instruments needed are compass and square, which can be purchased at small outlay or may be prepared economically. Over and above these things, says M. Malard, the families are able to furnish in natura or in money (one franc a year) a part of this material; or the business places, if requested, will contribute the articles.

From France and Germany experience reports that where work school methods are to be introduced it is wise to begin with small groups and gradually extend the method to the class and the school. The school desk is not suited for work school purposes; chairs and tables are better, for these can be arranged so that pupils face each other. Tables are also better suited for handling specimens and for modeling and making things. Where desks have to be used, they may be arranged in semicircular order, or so that the desks are turned toward each other.

This arrangement favors the important work school principle of group coöperation. When there is a drill on a new type problem in arithmetic one pupil from each group works at the board before the eyes of the class while the others use their exercise books. The groups check up each other with the aid of the blackboard work. If the pupil at the board commits an error his group calls attention to the error. During the recitation it frequently happens that a pupil cannot find the right expression for an object; then he steps to the board and endeavors to make a drawing of what he wishes to communicate.

The work school finds lessons in experience or connects them with experience, whatever the source in the textbook. Electricity is listed under nature study, and the traditional teacher discusses lightning and the lightning-rod, although no lightning-rod is found in the neighborhood and nothing has been struck by lightning so far as anyone remembers. The lesson proceeds from the book, not from experience. No child has any first-hand personal information to tell the others or the teacher and no common elaboration of the subject takes place. In group work the point of departure is sought, not in a textbook topic but in something the child has seen or experienced, and as this thing is up, a point is reached where the textbook helps.

But children do not see or find or hear or sing the same thing; each child has observed something individual and drawn individual conclusions about it. As a group, then, they coöperate with their hands and their thought; they approve, criticise, amend, reject or accept what is offered and the hour is spent in a healthy clash and interplay of intellectual forces. Physical and mental work are found to move in close relation to each other, favorable to the growth and the health of the body. As required by the nature of their tasks, the children stand or sit or kneel or bend over their work at the table, conferring with fellow pupils or asking their advice or help. And the children themselves soon discover that such conferring and collaboration must take place in a manner that does not disturb

the rest. The work they do in common leads to the experience that if the coöperation is mutually agreeable everything is done much easier and better. The pupil will see the advantage of finding his place in the group and of adjusting himself to the group requirement. A pupil who refuses thus to adjust himself, or disregards the understood rules of the group, excludes himself and forfeits his share of rejoicing in the common success.

And so the work school shows that its pupils are trained toward moral performance. The book school places examples of moral performance before the children — "Once upon a time other people performed moral acts" — but it does not give the child an opportunity to live through one of the exalted instances. The ordinary school forbids the child the simplest moral obligation — "Help thy neighbor whenever thou canst." "Leave him in distress," says the book school, "for you will be punished if you help him." The more single members assist each other, the better and speedier goes the work and the more agreeable are its processes — practical and friendly assistance, patience and voluntary subordination and the feeling of responsibility and solidarity. The high aim is set up of letting the children live lessons of honesty, truthfulness, morality and sympathy, instead of learning about these virtues in books.

The work school methods of Central Europe are in full accord with the Home and Community Study of Northern Europe. Both methods teach active life lessons. But Home and Community Study has a local character — local nature study, local history, local antiquities, with room for all the sentiment clinging to and growing about an ancestral home.

The approval which the work school instruction is receiving may, however, carry zealous teachers beyond its natural limitations and thereby bring on swift reproach. There is danger of allowing work instruction to subordinate itself to an apprenticeship or to premature specialization. To push a child into a trade early because he shows aptitude bars his outlook. In the primary classes, says the French economist Proudhon, the child should not be taught one trade, but ten, straight technique without the limitations of any trade.

Physical activity for children looks so reasonable that the work school will insist on its inclusion even in subjects where it will create utter confusion. The ablest teachers conduct literature study by securing a favorable group attunement for collective discussion and for joy in what the masterpiece offers. It is an occasion of composure from which physical stir is pretty much excluded. Here even ingenious graphs and pictorial devices exploiting the technical skill of the fingers will divert the pursuit from its chief ends. History, language study, and subjects calling for reflection can be helped by globes and charts and ancient relics, but quiet recitation periods must be retained to survey the trends which these things visualize. Evidently the work school principles will be most successful in those subjects where the hand work and the brain work may be most naturally and most organically united.

WANTED: A NEW DEAL IN HANDWRITING

STEPHEN G. RICH

Principal, Essex Fells Public School, Essex Fells, New Jersey

The time is ripe for an evaluation of present practices in the teaching of handwriting, with a view to discovering the desirable lines of development of the pedagogy of this subject. Parent, employer, teacher, and supervisor alike are dissatisfied with the present situation; the new methods and systems of the last two decades have thus far not made any appreciable diminution in the general dissatisfaction with the results of teaching handwriting. It is the aim of this article to develop some of the possible criteria for evaluating the situation and for deciding on desirable future trends; it is the aim also to point out what some few of these desirable trends are.

This article is not written from the point of view of the handwriting specialist, nor from that of the propagandist for any one system or method. It is, however, based upon experience, as pupil and as teacher, with seven — five American and two British — systems of handwriting. The writer has, and assumes for his readers, knowledge of what has been written about handwriting by the workers in the fields of educational measurement and educational sociology during the last decade and a half. For that reason specific references will not be given: it is to be understood that, without so saying, any idea in this article taken from Snedden is known to be his; similarly with Ayres, Bobbitt, etc.

CRITERIA

We write in order to get our meaning to the reader. This is the fundamental criterion for all work in handwriting. Although it may be desirable that a piece of written work, whether school work, bookkeeping (where still done by hand), or a letter, be good in appearance, this is a secondary matter. Handwriting is fundamentally and primarily a means for social intercommunication; to the extent that it serves this end, it is successful, and to the extent that it fails to do so, it is useless.

Two secondary or derived criteria follow from the acceptance of the fundamental one.

Any item in handwriting that leads to confusion on the part of readers is undesirable. Apparently this is obvious; in practice it is far from being recognized universally. Perhaps the most common case is the confusion of lower-case *a* and *o* in so many persons' writing (Fig. 1).[1] Any system of handwriting, however well worked out in other respects, which does not provide for prevention of such confusions is thus far defective. Another cause of confusion is the use, in some systems, of strange and puzzling letter-forms. The capital *T* of one of the more popular of recent American systems is a case in point; it also illustrates the first type of confusion, since it becomes in many persons'

[1] The figures are collected in the plate on page 338.

handwriting indistinguishable from the lower-case *t* (Fig. 2).

Any item that causes slow handwriting is undesirable. The capital *T* of Figure 2, contrasted with that of Figure 3 and with that of Figure 4, will show this point. In Figure 2 the little loop at the start of the cross-bar, the lifting of the pen to start the up-stroke of the vertical portion, and the extra line (up-stroke) at the start of the vertical portion are all time-wasters. Figure 4 shows a form, adopted as standard in one of the larger cities, that eliminates two of the delaying items, but retains a third one. Figure 3, which is the "old-fashioned" form, can be made with minimum number of strokes, in minimum time.

A number of similar cases, more especially with capital letters, may be listed; but it is not necessary here.

The requirement of elimination of slow items is one that needs increasing attention on the part of handwriting teachers. The British have progressed further than we on this matter. The author has had three eighth-grade groups in the British settlement of Natal, in South Africa, where British handwriting systems are in use, whose speed of writing was superior to that of any American group he has taught, and whose writing was, without exception, above any American forms for the same grade in point of legibility. At the same time, this criterion must not be applied one-sidedly: speed gained at the expense of legibility, by the use of confusing items instead of those unmistakable for other letters, is no gain at all. The criterion of speed is, nevertheless, important, since slow handwriting rather uniformly disinclines its users to any great amount of application of handwriting for communication.

All handwriting decays after the pupils have left school. The British express this neatly: "The copy-book hand changes into an individual formed-hand." In our American systems of handwriting, no attention seems thus far to have been paid to this important fact. Any adequate system of handwriting needs to be arranged so that the changes or decay which we find uniformly occurring during after-school life shall interfere as little as possible with the legibility of the writing. This decay often takes place before the end of school, as when a class passes a year in the seventh grade under a teacher who does not teach much handwriting. The distorted and confusion-producing capital *T* of Figure 2 is a case in point; the *a* and *o* of Figure 1, another.

The British have paid somewhat more attention to this aspect of the matter than have we. One system, popular in Natal, goes so far as to make all the "links" straight (Fig. 5). The writer has seen the after-school writing of persons who were taught this system, in specimens written up to ten years after leaving school. A high degree of legibility is maintained: decay curves the "links" slightly, but they are then not so curved as to cause confusion. Such confusions as those of Figure 1 are entirely avoided.

It is necessary to teach the movements that are actually going to be used. The author has yet to see a person, other than a teacher actually engaged in teaching handwriting by such a system, who uses the "muscular-movement" or "arm-movement" that plays so promi-

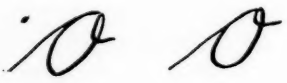

Fig. 1

As written. Copy.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

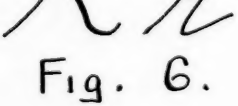

Fig. 6.

Fig. 7.

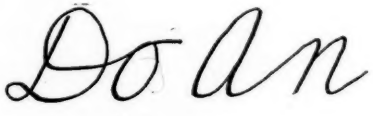

Fig. 8.

Fig. 9.

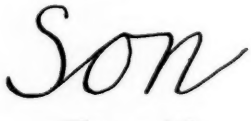

Fig. 10.

Fig. 11.

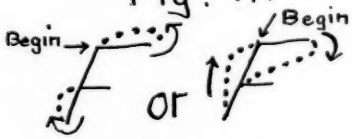

Fig. 12.

Fig. 13.

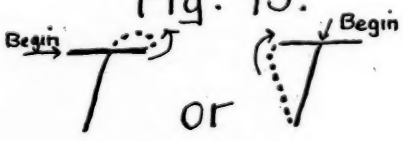

Fig. 14.

nent a part in certain American systems, in their own handwriting. In the reaction against copy-books, "muscular movement" has become a dogma; yet the pupils, however much taught it, promptly relapse into "finger-movement" on the first opportunity. In fact, the author will go so far as to claim that children who have never been taught any "finger-movement" will go into it, in spite of all that we may do, at the first opportunity. The spectacle of a strong partisan of the best-known "muscular-movement" system — a person who teaches it — writing a letter with entire disregard of this system and a maximum of "finger-movement" has twice been seen by the author. In fact, only a person with crippled fingers or with an artificial hand can be expected, in actual usage, to employ the "muscular movement."

It will be argued that there is error here in confusing "muscular movement" with the "arm-movement" or "wrist-movement." Theoretically this may be so; but in practice they appear, so far as the author's most careful observation goes, to be terms of identical meaning.

The teaching of handwriting is primarily and basically the teaching of a definite number of habits — about one hundred in all, if we count the elements of letters, the letters, and the means of combining them. If we try to teach "muscular movement" we are doubling the number of habits to be learned, while we are allowing those that are going to be used through the pupil's after-school life to be formed by chance, without instruction, and probably incorrectly in many cases.

SUGGESTIONS FOR IMPROVEMENT

The author does not believe that a wholesale adoption of any one of the British systems is desirable in this country, in spite of that fact that he is convinced that any of them will give better results in the ultimate quality and speed of handwriting than any system now in use here. It is highly probable that we can elaborate a new system, improving upon anything thus far devised, and better than any thus far in use in the British countries or in America.

From the existing British systems the author advocates taking the straight links shown in Figure 5. This will at once eliminate the difficulties due to confusion of lower-case *a* and *o*, the degradation of lower-case *r* as shown in Figure 6 and avoided in Figure 7. From these systems the connection of capitals with the succeeding letters should be adopted; this is in line with the practice of several of our own older systems (Fig. 8).

Figure 9 shows three forms of lower-case *r*. Form 1 is in common use in this country. Form 2 is an older one, formerly in large use in this country, and still used in some British systems. Form 3 is from one of the newest British systems; it avoids the risk of confusion with *v*, so common when form 2 is used, and the degradation of the usual American *r* as shown in Figure 6. The adoption of form 3 is recommended; on this the writer has had first-hand experience. In 1918 he changed from form 1 to form 3, with no loss of speed, and with considerable gain in legibility, in his own handwriting.

In certain of the letters it is probable

that a gain in both speed and legibility will result from an abandonment of the typical "script" forms used in all systems. Perhaps the most obvious of these is capital *S*. Figure 10 shows capital *S*, after the "printing" style, as used by the author in his own handwriting since 1916. It will be noticed that this letter is connected to the succeeding ones. Figure 11 shows a similar use of the "print" form of capital *F*. Although this is composed of three separate strokes, it can nevertheless be written more quickly than any of the traditional forms of the letter in script; the fact that it is connected to the succeeding letters is a distinct advantage.

One point made much of in certain systems is that the letters are formed in a single stroke or line, without lifting the pen from the paper. The value of this point for either speed or legibility is, to say the least, dubious. The systems to which the most exception has been taken thus far are to be commended for having omitted entirely this irrelevant criterion in the choice of their letter-forms. Figure 12 shows, by dotted lines, the motions of the pen in making the "print" capital *F;* Figure 13 and Figure 14 show a similar capital *T* for those who believe that the old-style *T* of Figure 4 is not as legible as it should be.

A large number of specific items such as these might be discussed; but it is probable that they had better wait until some person will study the subject exhaustively and produce an entire system of forms.

The author is entirely in agreement with those who object to the use of the copy-book for teaching handwriting—this not because of any objection to imitation as a means of learning to write, but simply because the pupil does not imitate the copy. Often the pupil cannot do so; he does not know how to make his pen or pencil go where it should, and cannot guess. But the more fundamental difficulty is that the pupil imitates his own writing on the line above where he is at work. A double change in procedure is necessary if this is to be avoided. There is only one way in which the pupil can learn the proper motions: that is, by seeing the teacher make them. Now it is anything but difficult for a teacher to learn to write on the blackboard without facing it: if the teacher's left side is to the board, the right arm outstretched, and the writing done thus, the pupils can see *how it is done.* Moreover, this writing must be *large:* letters may well be twice to three times the usual height of the teacher's blackboard writing. The second aspect of the changed procedure is the provision of a second sheet of paper for each pupil. This sheet is to be laid over the work already done, so that it may not be copied. The incorporation of these two features of procedure is probably an essential part of any adequate system of teaching handwriting.

The much-debated question of pen versus pencil for beginners must of course be considered. One thing is certain: it is easier for a pupil to learn to write with pencil *after* learning to write with pen than vice versa. One other thing is certain: given proper materials, children do not make the horrible mess with the pen that they are traditionally supposed to make in the lower grades. The author's observation shows him that even small children find it much

harder to make proper and legible letters with the pencil than with the pen.

Objection will be raised to the points just made, on the ground of presumed irrelevance. It will be claimed that writing with pencil is so much easier than writing with pen that the latter task should not be set to small children. But is this a fact at all? Is it not merely the case that with unduly rough paper and unduly harsh penpoints the task is hard? Without definite experimental evidence, it is of course impossible to decide; but it may here be set forth that until we have such evidence we have no right to assume that the pencil should be used first. Until the definite new system which has been hoped for earlier in this section is produced, it is a safe position to take that pen should be used as early in school as possible, and should be used as much as possible in the lower and middle grades.

Until we have definite evidence as to the degree of speed and legibility required in school in order to insure sufficient quality and speed of handwriting in the pupil's after-school life, it will probably be impossible to make any definite statement as to how far instruction in the subject should be carried. It is known that the New York City Civil Service Commission considers a penmanship rating 50 on the Ayres Scale as sufficiently good to meet their requirements. This is probably slightly in excess of the necessary minimum of legibility in adult handwriting. It is, however, a possible working basis. We do not, as yet, know what quality of writing should be had at the end of elementary school training to secure this quality in the adult script. The author has collected specimens of the handwriting of three of his relatives and of himself, over a range from ten years of age to thirty-three years, and from Grade 4 onwards. The scores at the end of elementary schooling are: 55, 65, 70, 70. The scores, arranged in the same order, at the age of 30, are 45, 50, 50, 60. The writing of the first and third persons shows a maintenance of the elementary-school maximum until college studies, with their note-taking, called for increased speed without time to learn to maintain quality. The second person went as low as 40 during high-school, and regained quality suddenly in the last year of college. The fourth person appears to have been more constant throughout the period studied than any other.

These few facts are enough, however, to indicate that the degree of decay to be expected is not less than 10 points on the Ayres Scale — probably more in most cases. With 50 as the rating for acceptable adult handwriting, it is safe to insist that quality 70, with corresponding speed, be attained in school.

Psychologically, any improved system of writing will have as its starting point the fact that synthesis of letters from separate movements is a task beyond the children in the lower and middle grades of the elementary school. It will therefore be built upon the teaching of the forms of letters, rather than upon teaching movements. It will also have an immense regard for the most basic of all laws of habit-formation: repetition *without exception*. It will provide for *avoidance* of error above all else.

MAKING AN EDUCATIONAL EXHIBIT

IDA VANDERGAW

Supervisor of Primary Work, Oakland, California

It having been decided that Oakland should contribute to the Educational Exhibit Department of the National Education Association meeting in Oakland and San Francisco in June, 1923, a central committee of eight was appointed to take charge. This committee concluded that so far as possible Oakland's exhibit should be one indicative of the objectives of the Oakland schools and of the progressive movements in education to which we have been giving special attention.

Our objectives, as stated by our leader, Superintendent Fred M. Hunter, being schools that are "workshops for making citizens," "foreshortened experiences of life," "places where youth tries itself out, learns to do by doing," it followed that the exhibit must give illustrations of types of school activities that, while indicative of the value of the curriculum subjects, must bear evidence of "sincere, energetic, creative participation on the part of the pupils; must give examples of "work not done by young people preparing for life, but by young people living life as they worked."

The objectives having been thus defined, the problems of organization had to be solved. It was decided to group the exhibit into six main divisions, emphasizing respectively Thrift, The Project Method of Teaching, Special Atypical Classes, Americanization, Science in the Service of Health and Citizenship, and Student Publications. For each of these divisions a chairman was appointed by the central committee. The chairman in turn selected as large a committee to work with him as he desired. This gave a working force of about fifty.

Another important problem was that of effective and attractive display. The Director of Art, also a member of the central committee, became the leader in this phase of the work. The central committee and division chairman in conference with her determined the proportion of wall and floor space essential for each division, its most effective location, as well as wall spacing, color of background, and all the other details essential to producing a unified whole. She also plotted the space for all wall exhibits, so that each chairman knew exactly in what form to assemble her material and where it was to be placed. This supervisor was also at the call of any classroom teacher desiring advice regarding effective arrangement of material.

The exhibit, then, was not one organized on subject lines. To the visitor who asked, "Where can I find work in arithmetic?" the answer had to be: "Only as arithmetic contributed to solving any of the questions connected with the problem in each division of the exhibit will you find it. In the Thrift division, for instance, you will find many illustrations of arithmetical

calculations and problems which serve to impress the value of thrift. In the Health and Science divisions you will find arithmetic similarly used." In her search for this material in the Thrift division, she found arithmetic used in solving genuine problems connected with household and personal budgets, economical buying, accounts of expenditures of school funds obtained through paper drives, entertainments, and other extra-school activities.

She also found that the committee had shown through the exhibit that every subject of the curriculum in each grade may contribute toward teaching children that "Thrift is one of the great constructive forces necessary to human development."

The work in English she found represented through original dramas and through illustrated booklets bearing on various problems in thrift. The social studies were represented by projects connected with the conservation of natural resources, fire protection, safety devices, and student participation in various school and community activities.

The home economics classes she found had contributed projects involving thrift in relation to food and clothing, among them being charming, daintily colored children's dresses made from flour sacks, and also attractive up-to-date garments made from old-fashioned faded garments.

The philanthropies made possible through thrift were vividly portrayed through a series of photographs. One of these might have been labeled "Salvage Made Over into Babies." In this were pictured tons and tons of newspapers being tied into bundles and weighed by high school pupils, trucks loaded to capacity, and then, marvelous metamorphosis! an artistic, comfortable day nursery with its happy baby tenants, children of working mothers.

The Special Atypical Classes division showed not only the type of activities best suited to pupils of the border zone mental type but also the atmosphere it is desirable to create in these classes. This was done by transplanting from its original setting in a schoolroom a Japanese Tea Garden. The various types of work involved in this project had motivated for a semester much of the academic work of the class, as well as the manual activities—woodwork, sewing, rug-making, chair-caning, toy-making, crêpe paper work, book-binding, etc. A creation so artistic gave not only joy to the makers but confidence in their own ability, for their work had won the unqualified admiration of their schoolmates in other classes.

The Americanization division stressed the work of the home teacher, showing something of the scope and character of her work among the foreign-born. Lesson materials, model lessons, a layette such as foreign-born mothers are taught to make, garments and millinery made in Americanization sewing classes were displayed, as well as models of a day nursery and health center. Large photographs showed the activities of Neighborhood Schools — women's classes and clubs, nutrition work, and other activities that enlist the wholehearted response of the foreign-born woman.

The greatest amount of space was allotted to the division termed Science

in the Service of Health and Citizenship. Through sand table settings, posters, picture scrapbooks, dramas, drawing, compositions, industrial art, the kindergarten and elementary grades showed how health habits are taught.

Through projects involving care of pets, gardening, first aid, the hygiene of eyes, teeth, methods of controlling bacteria, etc., the junior high schools showed how the children had gained the knowledge back of health habits and a better understanding of themselves.

Through projects illustrating proper lighting, radio, first aid, insect pests, nutrition, etc., the senior high schools showed the contributions of the special sciences in promoting the welfare of the school, the home, and the community — therefore vital and compelling in their appeal.

Another division was devoted to student publications, as this type of work has, in addition to its value in motivating English composition, proved to have a strong influence in developing citizenship and community feeling among students, and offers opportunity for student initiative and responsibility. Five high school papers and twenty-two junior high and elementary school papers were displayed. A series of charts also showed the type of activities carried on in the printing shops from the simple work in the first year to the fine work in the senior year.

The Project Library division was part of the Oakland Teachers' Professional Library. It had been devised as a means of making available to all interested the experiences of their fellow teachers in using the project method. From time to time teachers had been asked to write the history of the development of projects that were representative of the many types being carried on voluntarily throughout the system. The hundred in the exhibit were grouped according to grades, beginning with the kindergarten and ending with the senior high school. The plan had been inaugurated about a year ago, so the collection was but the nucleus of what in time will be an important and large division of our Teachers' Professional Library.

This exhibit, as all others, showed the close coöperation existing between departments of instruction in Oakland. The artistic lettering on the covers was the work of some of the seventh- and eighth-grade art classes; the book plate was the result of a competition between senior high school art students; much of the typing was done by advanced commercial students.

A supplemental division of the Oakland exhibit, consisting of projects in the applied and industrial arts, had to be set up in Oakland because of lack of room in the hall in San Francisco. It was unique in that, to the degree that space permitted, local merchants paralleled the school exhibit. For example, a studio furnished by a local interior decorator was shown. Adjoining this was another studio, which represented the work of high school classes in art and cabinet-making.

Two hats were placed side by side, one representing the work of a local milliner, the other, that of a student in a class of applied arts. These two had competed in making the best reproduc-

tion of a hat pictured in a standard millinery magazine.

One section showed practical work done by boys in the machine shops of the vocational schools. There were machine lathes, drill presses, woodworking and machinist's vises, all kinds of reamers and other machine-cutting tools, many of which were equal and even superior to factory product.

Miniature reproductions of stage settings, made for plays given in the high schools to raise money for school and community projects, gave evidence of the close correlation of the art department in our high schools with other departments: the drama in the English courses; costume designing by art classes for pupils in sewing classes; planning of stage properties to be carried out in the shops; designing of advertising posters to be made by classes in commercial art. All of these activities naturally led to a close study and discriminating appreciation on the part of the pupils of commercial products as well as to a realization of the value of the fine and applied art study in which they were engaged. A better understanding of progressive school movements on the part of the business men of the community was another outcome.

Now, as to results: was the project worth while? We can speak only for ourselves. To the Oakland teachers and supervisory force, most decidedly, yes. The exhibit was truly a project; all engaged in contributing toward it grew in the process of solving problems; we experienced in large and generous measure the delight of coöperative work; we got a clearer vision of the value and possibilities of socialized school activities; we became eager for further experimentation. The exhibit has also made possible the realization of a project which the supervisory force has long desired to undertake, a room fitted up for permanent exhibit purposes, easily accessible to the teaching force. Our principals' club has voted us the balance left from their N. E. A. exhibit fund to finance this project, so our N. E. A. exhibit has also this characteristic of a true project: it has led on to other worth-while activities.

THE CLEARING HOUSE

A DRAMATIZATION PROJECT IN THE THIRD GRADE

The purpose of this article is to show not only the method of procedure used in allowing a group of children to work out their own dramatization of a story but also to point out the many problems correlating other subjects which grew out of the main project. The project was initiated by the children's desire to dramatize the story of Hansel and Gretel, which I had told them orally.

After the story had been told to them, different children were allowed to retell the story, the retelling being followed by criticisms from the class. These criticisms included the things the children liked as well as points that could be made better.

Our Mothers' Club arranges programs for meetings, so that each room contributes a program once during the year. A few days before telling the children the story of Hansel and Gretel, I had informed them that we were to have the program for Mothers' Club that month. Some of them wanted to know if we could not write a play about the story and then give it for our program.

The writing of the play was done as class composition. Different children gave different sentences and those that the children thought good enough were written on the board. Some of the sentences were practically those of the story as it had been told to them, while others were their own ideas. Some parts of the story were left out, other parts added. This was left to the children. Some of their ideas were rather amusing; for instance, they insisted that the play end with, "We shall always be happy."

The children then chose several children to try the part of each character. We had tryouts for these children, followed each time by criticisms from the class. Each child had a chance to try out at least one part and some of them tried out several parts.

The class then voted for the child they thought best for each part and these children were allowed to give the dramatization for Mothers' Club, after trying it together. When the children were dramatizing they were not required to memorize the dramatization as the class had written it, but each one gave his own interpretation. Memorizing defeats the true purpose of dramatization, which is to give the child a chance to show his own interpretation.

After giving the dramatization for Mothers' Club, the Fathers' Club asked the children to give it for them. Later they gave it for a group of teachers, and finally a lodge asked them to give it.

If we had not done anything else with the dramatization, I think it would have paid because of the joy and enthusiasm which carried over into the other work, but I think the children derived even more value from the other work which they did in connection with the dramatization.

While we were working on the dramatization, during language study period, the children worked on Hansel and Gretel booklets. These booklets contained cuttings and drawings of the different characters and places in the stories, also different scenes in the story which they made to answer questions that I asked them or a question that some child asked about the story. After the booklets were finished, the children worked out the story in the sand table.

During the time that we were working with the project, our spelling lessons

consisted of words that we needed to use in this work.

Those who represented the gingerbread children made their own costumes. They fashioned aprons and caps out of orange-colored cambric. They scalloped the edges because, they said, ginger cookies are baked in scalloped pans, and they made brown spots with their crayons for raisins.

As it happened, our physical training supervisor had given us the folk dance and song "Little Playmate" that month, so we substituted it for the one the story told about, though the words were slightly different.

As a reward for working so hard and giving the dramatization so many times, I told the children they might go down to the kitchen some day and make some gingerbread children. This brought in more language lessons and an arithmetic lesson to plan for the actual making of the gingerbread men. Recipes were brought from home and the class chose one.

The children decided that the best way to manage the baking would be to choose committees to take care of each part of the work. The following were the committees chosen:

1. Committee to buy butter, sugar, molasses, and flour.
2. Pan and spoon committee.
3. Creaming butter and sugar.
4. Molasses.
5. Water and soda.
6. Spices and salt.
7. Flour.
8. Dividing dough.
9. Greasing pan.
10. Baking.
11. Cleaning up.

In choosing committees the children decided how many would be needed for each committee, then voted for the person they thought would be best for chairman of that committee. Each chairman was then allowed to choose his helpers. When two chairmen wanted the same person for helper, the class voted which committee would be best for that person.

The buying committee, numbering four, went to two or three nearby stores and got the prices of the articles they were to buy. They then decided where they could do best, and bought the articles. The little boy who had charge of buying the molasses found he could get it cheaper by buying from his mother, who got a 2-gallon bucket from the country.

The next day the recipe was again written on the board, together with these statements furnished by the buying committee:

1 pound of butter costs 48 cents
1 pound of sugar costs 15 cents
2 gallons of molasses cost $1.55
6 pounds of flour cost 30 cents
1 pound of raisins costs 30 cents

The children were then told to find the cost of the amount of each article used, and the total cost. The mothers were allowed to donate the spices, salt, and soda, as we used such small quantities. They decided that these would be about two cents altogether, and added this amount to the total cost.

This was a 3-B class that had not yet had division involving remainders, yet nearly all of them were able to tell that if 1 pound of sugar cost 15 cents, 1 cup or half of that would cost $7\frac{1}{2}$ cents, and most of them knew they would have to pay 8 cents at the store. The only thing I told them at the beginning of the lesson was that 1 pound equals 1 pint and that 1 cup is half of 1 pint. Most of the children were not able to find the cost of the molasses in study period, so in class time there was a splendid chance to introduce short division involving remainders. The problem the children had was as follows: "If 2 gallons of molasses cost $1.55, what will 1 cup cost?" The class agreed that the

first thing to do was to find what 1 gallon cost. I then explained to them how to divide $1.55 by 2, though even this simple division does not really come in the regular work till 3-A. They thought they could then work the rest of the problem for themselves, and it was surprising how many of them were able to do so in spite of the fact that it took some rather complicated thinking and they again had to apply the division just taught. I think that if they had been given a problem like this without any special motive for working it, the majority of the class would have thought it so difficult they would not even have tried to solve it.

That evening, before we went down to the kitchen to make the gingerbread men, we had a short hygiene lesson about keeping the hands clean and why we should be especially careful about cleanliness when cooking. When we did go down after scrubbing our hands, there was very little confusion as everyone knew just what he was to do. In dividing the dough, that committee had to use arithmetic facts again to decide how to get 30 pieces of dough. They decided to roll the dough out in a big oblong form and make five rows with six in each row. We had two big pans to bake them in, so they made three rows with five in a row in each pan. Each child made his own gingerbread man, using raisins for eyes. It was nearly five o'clock before they were all baked and everyone was ready to go home, but such happy boys and girls told me goodby that I could not regret the time spent.

Several of the mothers asked for the recipe, so I let the children copy it and add it to their booklets.

The entire project took about six weeks, but I feel that the results to the children were much more lasting. The last week of school, for a language lesson one day I let the children write about the work they had enjoyed most during the year. More than half of the class said they liked the dramatization better than anything else. One little girl said, "It was so much fun and it made all our work seem so interesting and so much easier."

FAYE COLE,
Riverside School,
Decatur, Ill.

GOING INTO BUSINESS — AN ARITHMETIC PROJECT

The Course of Study in Arithmetic, as outlined for Grade 7, offers an unusual opportunity for a project of sufficient scope to motivate the entire term's work, including percentage, taxes, insurance, bills, accounts, receipts, interest, promissory notes, saving money, paying at a distance, loans and banking. The big problem is to correlate or unify these various topics.

Following is an account of a plan successfully developed with four classes in a departmental group last year. Fortunately, the "situation" presented itself in a class discussion from a lesson from our text (Thorndike's *Arithmetic*, Book III, page 144) on the topic of "Borrowing Money to Go into Business." One of the pupils remarked that John Wanamaker had once said that if he lost all of his money he could become as wealthy as ever within ten years through the conducting of his business. A discussion naturally followed. Finally the teacher asked the class if they would like to go into business. Immediately came an enthusiastic response from the entire class, "Yes." Then they were asked to suggest the kind of business they would prefer. Every type from a poultry farm to a radio-supply store was suggested, until in one 7-B class a boy mentioned a dairy and light lunch business and cited a well-known establishment of the kind in the neighborhood, where the proprietor has been so successful that he now owns several stores

in various parts of the city. This suggestion met with the hearty approval of nearly the entire class; and so our project, the purchasing, equipping, and operating of the dairy business, was conceived.

We realized that we had entered upon no small undertaking, and also how little we knew of the disappointments, vexations, and failures — yes, and the joys and the triumphs that were in store for us.

The development of the class aim was not a difficult task, so enthusiastic were the pupils to reach the goal, "to make money." To realize this goal we planned as follows:

1. To have a certain amount of money always on hand for cash payments.
2. To borrow from a bank.
3. To so conduct the business that the returns would enable us not only to pay our taxes and the interest on our indebtedness and insurance, but also to be able to realize at least six per cent on our investments, after paying operating expenses. Then, too, we wanted money left on hand to make payments on the principal borrowed.

A volley of questions followed the statement of our goal. (1) "How shall we get money to invest?" After some discussion this was settled by agreeing to form a stock company, each member subscribing for a certain number of shares ($100 par value). We next elected officers for the company. The president and secretary, taking charge of the meeting, immediately proceeded with the business. The secretary recorded the data on the blackboard, while the members of the company kept similar accounts in their notebooks. (2) The next important questions that arose were: "Where shall we open our business?" "What are some of the important things to be considered in selecting our location?" "How much will the property cost?" "How much will the equipment cost?" The company soon realized how limited was their knowledge, and that these problems would have to be thoroughly investigated. Committees were appointed to consult agencies, newspapers, and catalogues. The work was enthusiastically done and reports were made to the class by the committees.

We estimated the cost of various properties in suitable locations. We considered the amount of loans and the interest on the same, insurance problems, promissory notes, mortgages, etc., and compared notes, finally selecting and deciding upon a certain property and a name. "The Busy Bee Dairy Company" was the choice of the majority of the company. We next took up the matter of equipment. The committees that were appointed to look up this matter wrote upon the board lists and discounts from catalogues. From this data problems were solved with much interest, since each question was of vital importance to the success of the business.

Bills, accounts, and receipts were accurately made out when we ordered our stock. An improvised post office was established in a corner of the room, so that money orders could be obtained and cashed. A bank was also established with its various departments, where accounts were opened, checks cashed, and bank drafts obtained. This feature especially interested the pupils and made the business seem very real to them.

The advertising committee, appointed by the president, and selected from the best artists in the class, did much to increase the business. A blackboard in the rear of the room was used as a store window. Posters and artistic drawings in colored crayon attracted no little attention to the price lists of goods and to the frequent special sales which were taking place. Portions of the window settings were changed daily. When the "Food Show" held annually in our city was announced, a suggestion was made and carried by the company to advertise our superior line of goods by having a booth at the show.

Souvenirs of various goods as well as posters were made ready to be displayed in the booth.

Some of the members of the company represented themselves as proprietors of hotels and boarding houses, others as members of private families patronizing "The Busy Bee Dairy Company." They sent in large orders for goods, so that the company was kept busy restocking their stores, thereby increasing their business and profits.

Two rival baseball teams were organized by our company. These teams played frequently and the games were greatly enjoyed by the participants. The games afforded opportunity for drill. The teacher was pitcher and used problems and questions as baseballs. Each problem was worked on a time limit by the pupils at their seats. A baseball diamond was drawn upon the board, and umpires were selected. Strikes, fouls, and home runs were recorded according to the strictest rules of the game. A problem unfinished was called a strike; completed, but wrong answer, a foul; correct answer, a home run, etc. The side having the lesser number of outs and the greater number of runs was the winner.

Near the end of the term, the company took account of stock. They were surprised to find that they had been so successful. Not only had they succeeded in realizing their desired goal, but they had a goodly surplus on hand which was divided amongst the stockholders. A suggestion was made by one of the members that this money could be profitably used by the company if invested in a farm, where dairy products could be had at cost. This suggestion could be well developed in a Grade 8 project.

After criticizing both favorably and unfavorably our method of organizing and operating "The Busy Bee Dairy," the company came to the conclusion that the business had been a success, and that the work had been thoroughly enjoyed by the members of the class.

This class was one of four departmental classes, each having an arithmetic project, "Going into Business," extending throughout the term. The other 7-B class organized as "The Twentieth Century Sweet Spot Company" (confectionery and bakery business). Two of the classes were 7-A grades, namely, "The White Star Grocery Company," and "The Universal Sporting-Goods Center." All of these classes stressed all of the topics included in the Course of Study. The teacher acted as guide, participating actively only when necessary to teach new work, or to clarify some point needed in carrying on the business. These four stores coöperated with each other whenever possible, allowing discounts. Their main object, to make money, was constantly kept in view.

The latter three businesses, while mainly conducted in a manner similar to the one described in detail, differed from each other in having their own problems to solve. The numerous original suggestions that were put forth by the members of each company gave quite a different trend or aspect to each business, which was indeed interesting to note.

Near the close of the term a comprehensive written test was given to these classes. It was found that they not only measured up to the usual standards but surpassed them. It was especially gratifying to note that through the whole-hearted purposeful activity on the part of the pupils, they had gained more than a mere acquisition of arithmetical processes. They had acquired a certain initiative, executive ability, self-reliance, and method of handling new situations.

KATHRYN E. MANNING,
Alexander Dallas Bache School,
Philadelphia, Pa.

A HINT FROM THE SKY FOR THE SCHOOLROOM

A LESSON IN ORAL ENGLISH

Every alert teacher endeavors to make capital of each contact in daily life, for the benefit of her pupils. Earth, sea, and air are made to contribute to classroom needs. Some time ago, such contribution came from the air.

The ZR-1, our Navy's largest dirigible, hung low over Philadelphia. It posed, nosed, floated, and disappeared. It was *the* event of the moment in the Quaker City.

On the following day, the front page of the *Philadelphia Public Ledger* gave the teacher of sixth-grade English an excuse for deviating from her plan for the day. The paper contained a small bulletin of facts concerning the air monster, and a well-written article describing its visit to the city.

Fruitful lessons in Oral English grew out of the incident, for the sixth-grade classes in Girard College. The article from the *Public Ledger* was read to the class for the story itself. Then:

I. Interesting expressions were selected, and various ways of wording the same thoughts were listed.
   1. "A gleaming bulk" (a shining monster).
   2. "Glinted" (gleamed, sparkled, shone).
   3. "Shimmering silver" (bright, glittering).
   4. "Purring a hymn of praise" (whispering words of congratulation over the success of its first trip).
   5. "To circle majestically" (with dignity, in a princely way).

II. Figures of speech were studied. This furnished an opportunity for introducing figurative language, which was new for the classes.
   1. "The airplane is the 'eye of the Navy,' the 'watchdog' of the Navy." (Personification and metaphor.)
   2. "It floated like a feather."
      "Two tiny seaplanes circled like flies around the giant." (Simile.)
   3. "All Philadelphia stood still and stared."

III. Synonyms and meanings.
   1. "To achieve" — to accomplish.
   2. "-in and -ible" — that may not be heard.
      "Suffix" and "prefix" were explained.
      The idea of "word families" came in naturally here: in*aud*ible, *aud*ience, *aud*itorium.
   3. "Insignia."
      "A white star in a blue field is the *insignia* of the American Air Service."
   4. "Economical" (use of dictionary).

IV. Parts of Speech.

Nouns	*Adjectives*	*Verbs*
mammoth	filmy	glinted
monster	gleaming	gleamed
giant	shimmering	shone
bulk	tiny	sparkled
haze	cigar-shaped	circled
feather	sun-touched	
silver		
seaplanes		

V. A discussion of the question: What made this article so interesting?
   1. The use of word pictures.
   2. The choice of nouns, adjectives and verbs.
   3. The use of figurative language.

VI. A talk on "The Habit of Listening Actively."
   What is it? Are you cultivating it?
   Have you an idea of your own as you listen to reading?
   Does *my* thought provoke *your* thought?

And the ZR-1 "knew nothing about the affair!"

MARY PEOPLES,
Girard College,
Philadelphia, Pa.

AS REPORTED

AT THE CHICAGO MEETING

The program of the Conference at the Chicago meeting was carried out as announced and the papers read will, as far as possible, be published in this JOURNAL. There was a notable consolidating of gains, speakers hitherto supposing themselves to be at variance in their views finding that fundamentally they are together.

Possibly the most striking single statement was Professor Horn's declaration that in all the common-school subjects he had found by repeated experiment that purpose is the most important factor in learning — more important, in fact, than all other factors put together. This provides the adequate answer to an opinion quoted with approval in a recent issue of another magazine to the general effect that a project curriculum gives no better assurance that learning will take place than any other. It squares, too, with the results announced by Mr. Collings in his recent book.

The luncheon on Wednesday, though barely announced, was attended by about sixty. Professor Kilpatrick conducted a round table on the three topics: recent advances in education, improvement of the work of the Conference, improvement of the JOURNAL. Among the speakers were Miss Mabel E. Simpson of Rochester, Miss Margaret Madden of Chicago, Miss Mary A. S. Mugan of Fall River, Miss Margaret Noonan of New York, Mr. Leo C. Brueckner of Minneapolis, Mr. S. A. Courtis of Detroit, and Mr. Paul A. West of Chattanooga. The idea most often emphasized was the need of more generally recognized standards by which to measure the quality, both of teaching and of supervision.

The Conference at the session on Wednesday elected the following to membership on the Board of Directors for a period of three years: Mr. Ernest Horn, Professor of Education in the University of Iowa, Mr. James F. Hosic, Associate Professor of Education, and Mr. William H. Kilpatrick, Professor of Education in Teachers College, Columbia University, Miss Mary W. Postell, Assistant Superintendent of Schools in Atlanta, and Mrs. L. M. Russell, Supervisor of the Intermediate Grades in Chattanooga.

The Conference also voted to abolish associate membership, with the understanding that some provision will be made for club subscriptions to the JOURNAL. As soon as feasible, the Conference proposes a yearbook of special investigations in its field, to be discussed at one of the sessions of the annual meeting. The details of this will be left to the Board of Directors and the Executive Committee.

The Board of Directors on Wednesday elected the following officers: President, for one year, Professor Kilpatrick; Vice-President, for one year, Miss Pennell; Secretary-Treasurer, for three years, Professor Hosic; member of the Executive Committee, for three years, Miss Simpson.

The Board discussed the question of its future policy as to the JOURNAL at some length and decided, first, to take definite steps to make sure that all who now receive the JOURNAL do so either as members of the Conference or as subscribers through conscious choice of one method as opposed to the other; second, that information as to both membership and subscription be included in all promotion material and in a conspicuous place in each number of the JOURNAL; third, that a series of alternative propositions as to the business management of the JOURNAL be considered so that the

Board may at another meeting choose the best, meanwhile continuing the present arrangement.

The financial report of the Secretary-Treasurer for the period from March 1, 1923, to February 29, 1924, was as follows:

THE NATIONAL CONFERENCE ON EDUCATIONAL METHOD

FINANCIAL STATEMENT

March 1, 1923, to February 29, 1924

Receipts		
Balance on hand March 1, 1923	$285.93	
Memberships	824.80	
Single copies of JOURNAL	7.75	
Sample Projects	8.20	
Refund from World Book Co. on postage	16.00	
Total receipts		$1,142.68
Expenditures		
World Book Company	$338.50	
Postage	28.10	
Printing and supplies	77.75	
Clerical services	476.40	
Miscellaneous	15.99	
Total expenditures		936.74
Balance on hand February 29, 1924		$205.94

This report was approved.

The handling of the annual meeting of the Conference will be much simplified by the action of the Department of Superintendence. At its business meeting on Tuesday, on motion of Superintendent Davidson of Pittsburgh, seconded by Superintendent Hunter of Oakland, the Department voted to invite the National Conference on Educational Method to meet with it hereafter as one of the affiliated societies. This will cause the printing of the Conference program in full in the official announcement of the Department, and those who wish to participate in its meetings will have the opportunity. Dr. Davidson deserves the thanks of the Conference for his timely and effective assistance.

THE PRINCIPALS' ASSOCIATION

One of the most striking features of the winter meeting of the N. E. A. at Chicago was the annual conference of elementary school principals. This organization occupied the LaSalle Hotel as headquarters, conducted four half-day sessions, and enjoyed a banquet arranged by the Principals' Club of the Chicago public schools. The attendance on some of the sessions ran as high as a thousand, and six hundred were seated at the dinner on Tuesday evening. These facts give some idea of the enthusiasm which the organization has been able to arouse.

Among the topics discussed were the following: "Standards by Which Elementary School Principals May Judge Classroom Work"; "The Platoon School"; "The Shortening of the Elementary Course of Study"; and "The Right Relationship of Coöperation Between the Elementary School Principal and Special Supervisors."

Plans for the Yearbook to be issued later in the season were presented by the chairman of the committee, Mr. Arthur S. Gist of the Day School in Seattle, Washington.

THE READER'S GUIDE

FOR VARIOUS TASTES

The new books singled out for special mention this month are sufficiently various to suit everybody. Caldwell and Courtis take a look at the past and by comparison with the present show us what progress we are making.[1] They go back to the first survey of schools made in America, that of Boston in 1845, and put the tests and results of that time side by side with those same tests and their results in the same city in 1919. Thus is the pessimist answered. The documents alone which these authors reprint justify the volume and it is withal very readable.

Professor Kilpatrick has put into permanent printed form the source quotations which his classes in the Philosophy of Education have been using for several years.[2] Striking opinion on a wide variety of topics is included.

Professor Mead's book deals with educational psychology.[3] The writer has aimed at two classes of students: beginners, who will find the several brief chapters sufficient for one semester's work, and advanced students, who will use the text as a syllabus and by means of the extensive lists of references expand the treatment into a year's study. The flexibility of the book is further enhanced by the numerous exercises which follow each chapter. This and its up-to-dateness will commend it to many.

Testing and teaching is the theme of Professor Paulu's story.[4] He would test to find out what is needed by the pupil and then teach as the most economical way of supplying what is needed. Since he has had the smaller places in mind, he has made his text very clear — for the ordinary student rather than the specialist — and because he is interested in getting results, he enlarges upon what to do after you have tested. Since his purpose was not to write a treatise on tests as such, he has selected those actually used by him and others in certain definite situations and found effective. Principals and teachers not themselves authorities in this field will find this volume highly suggestive.

Professor Downey pioneers.[5] While others have been dealing with the relatively tangible reactions of knowledge and skill, she has been pursuing the more elusive emotions. The result is a set of tests of "will" and "temperament" and a treatise dealing at some length with their devising and use. The main medium employed is handwriting, and the scores obtained by an individual constitute what Miss Downey calls a "will-profile," a graphic record of the subject's coördination of impulses, care for detail, motor inhibition, resistance, assurance, motor impulsion, speed of decision, flexibility, freedom from inertia, and speed of movement. Here at last we seem to come on the person where he lives. The testing-program as it has been developing has seemed to threaten to give us a thoroughly mechanical type of education. Miss Downey's timely studies will tend powerfully to restore the balance. The author's charming style, too much of a rarity in the educational books of the day, will commend it to a very wide and appreciative circle of readers.

[1] *Then and Now in Education.* By Otis W. Caldwell and Stuart A. Courtis. Yonkers, N. Y.: World Book Co., 1924.
[2] *Source Book in the Philosophy of Education.* By William H. Kilpatrick. New York: Macmillan Co., 1923.
[3] *Learning and Teaching.* By Arthur R. Mead. Philadelphia: Lippincott.
[4] *Diagnostic Testing and Remedial Teaching.* By Emanuel M. Paulu. New York: D. C. Heath & Co.
[5] *The Will-Temperament and Its Testing.* By June E. Downey. Yonkers, N. Y.: World Book Co.

SIGNIFICANT ARTICLES

TENDENCIES IN COMPOSITION BOOKS

One of the questions of current interest is whether marked differentiation is taking place between the materials arranged for use in the upper grades of the ordinary elementary school and the corresponding grades included in the junior high school. Professor R. L. Lyman of the University of Chicago has completed and published a study relating to language tests for these grades. He chose twelve seventh-grade language texts and an equal number for the eighth grade published since 1920, half of each group being specially prepared for the junior high school. He finds a considerable range of variation in these books but no marked distinctions as yet between the grades and the junior high school. As tested by the progressive tendencies in the teaching of English set forth in the Committee of Thirty, these books show comparatively slight advance, all of which apparently illustrates once more the power of tradition. The article will be found in the *Elementary School Journal* for February.

TRAINING IN READING

From the Research Department of the Horace Mann School of Teachers College comes an interesting study of the general and specific effects of training in reading, with observations on the experimental technique employed, the writers being Professor Arthur I. Gates and his research assistant, Miss Dorothy Van Alstyne. The types of training undertaken are called respectively the paragraph-question method and rapid reading with oral recitation. The tests employed for measuring the transfer and improvement included Thorndike, McCall, Monroe, Courtis, a word perception test, a cancellation test, and a picture naming test. The conclusions arrived at are: first, that reading as ordinarily taught does not provide for development of all the important types of reading ability; second, that there is apparently small transfer of ability from one type of reading to another; third, that economy requires the utilization of the principles ordinarily followed in practice experiments.

NEXT STEPS IN EDUCATIONAL SURVEYING

In the *Educational Review* for February a brief but highly suggestive article from the pen of William H. Allen deals with the recent steps in educational surveying. Mr. Allen's main contention is that the survey of the future will be a self-survey. He thinks the technique of surveys from the outside has been developed with a minuteness quite beyond its practical value. He suggests particular topics for investigation, such as, how far the National Education Association is living up to its possibilities, whether the aims of schools and colleges are sound, and the nature and causes of teachers' attitudes toward their work.

WHAT CHILDREN SHOULD READ, CONTINUED

Professor B. R. Buckingham continues in the February number of the *Journal of Educational Research* his discussion of "What Children Should Read in School." He declares that the reading books of the immediate future will be much larger. A third reader, for example, may consist of two, three, or even four volumes. The material must be such as to facilitate rapid, rhythmical eye movements; mechanical devices should be included to enable the timing of the reading. There will be many questions on the thought of the material so that children may read to find answers to questions. Emphasis will be placed on information rather than literature. Selections should be long enough to occupy the most rapid reader several minutes, and there will be helps to the teacher in the conducting of lessons in silent reading.

THE NEW BOOKS

The Story of Man's Mind. By George Humphrey. Boston: Small, Maynard & Co., 1923. Pp. 302.

Creative Chemistry. By Edwin E. Slosson. New York: Century Co., 1923. Pp. 311.

The Future Independence and Progress of American Medicine in the Age. A Report. By John J. Abel et al. New York: Chemical Foundation, Inc., 81 Fulton St., 1923. Pp. 80.

The Riddle of the Rhine. By Victor Lefebure. With preface by Marshal Foch. New York: Chemical Foundation, Inc., 1923. Pp. 282. Illus.

The Heart of the Curriculum. By E. Ehrlich Smith. Garden City, N. Y.: Doubleday, Page & Co., 1924. Pp. 363. $1.50.

The Common Sense of the Constitution of the United States. By A. T. Southworth. New York: Allyn & Bacon, 1924. Pp. 145. $.60.

Roget's Treasury of Words. Abridged from Roget's *International Thesaurus.* By C. O. S. Mawson and K. A. Whiting. New York: T. Y. Crowell Co., 1924. Pp. lii+444. $1.00 net.

Essentials of Speech. By John R. Pelsma. New York: T. Y. Crowell Co., 1924. Pp. 326. $2.00 net.

Safety First for School and Home. By Harriet E. Beard. New York: Macmillan Co., 1924. Pp. 223.

Twenty-Five Years of American Education—Collected Essays. Edited by I. L. Kandel. New York: Macmillan Co., 1924. Pp. 485.

Cotton. By Edna Turpin. New York: American Book Co., 1924. Pp. 266. Illus.

The American Community. By James A. Woodburn and Thomas F. Moran. New York: Longmans, Green & Co., 1924. Pp. 503. $1.48.

Ritchie's First Steps in Latin. Revised by John C. Green, Jr. New York: Longmans, Green & Co., 1924. Pp. 120. $.88.

Ritchie's Second Steps in Latin. Revised by John C. Green, Jr. New York: Longmans, Green & Co., 1924. Pp. 219. $1.00.

Then and Now in Education—1845: 1923. A Message of Encouragement from the Past to the Present. By Otis W. Caldwell and Stuart A. Courtis. Yonkers, N. Y.: World Book Co., 1924. Pp. 410. $2.20.

IN PAPER COVERS

The Twenty-Third Yearbook of the National Society for the Study of Education. Part I, The Education of Gifted Children; pp. 443. Part II, Vocational Guidance and Vocational Education for the Industries; pp. 455. Bloomington, Ill.: Public School Publishing Co., 1924.

Objectives in Elementary Rural School Agriculture. By E. E. Windes. Washington, D. C.: Bureau of Education, Rural School Leaflet No. 11, March, 1923.

Nixie Bunny. Jointed Picture Cut-Outs. No. 3, Holiday-Land. Chicago: Beckley-Cardy Co., 1922. $.35.

Wisconsin Reading Circle Annual, 1923–24. Issued by the State Reading Circle Board, Madison, Wis.

A Study of the Relation of Some Physical Defects to Achievement in the Elementary School. By Jasper N. Mallory. Nashville, Tenn.: George Peabody College for Teachers.

First Yearbook, Department of Superintendence. Washington, D. C.: National Education Association, February, 1923.

Survey I, Department of Instruction, Norristown, Pa., Public Schools, 1923.

Report of the Joint Committee on Grammatical Nomenclature. Revised ed. Washington, D. C.: National Education Association, October, 1923. $.25.

Reading Survey in the Public Schools of Newark, N. J. Monograph No. 10, March, 1923.

Circular of Information, 1922–23. Library School of the New York Public Library.

Qualities Related to Success in Teaching. By Frederic B. Knight. New York: Teachers College, Columbia University, Contributions to Education, No. 120.

A Course of Study in Terms of Children's Activities. For Kindergarten and Primary Grades. By Helen M. Reynolds. Seattle, Wash.: Room 846, Central Building. $.50.

Supplement to the New World Problems in Political Geography. By Isaiah Bowman. Yonkers, N. Y.: World Book Co., 1923. $.50.

Supervision. Report by the Education Committee, the Chicago Principals' Club. Chicago, Ill.: D. S. Wentworth School Press, 1923.

English and Business. Report of the Commercial Education Research Committee. New York: Board of Education, June, 1923.

Report of International Health Education Conference of the World Conference on Education, under the auspices of the N. E. A. New York: American Child Health Association, 370 Seventh Ave.

Convincing Testimony from Owners of Webster's New International Dictionary. Springfield, Mass.: G. & C. Merriam Co.

Reading in the Saint Cloud Public Schools, Grades One to Six. By Ruth E. Hilpert. St. Cloud, Minn.: Board of Education, 1924.

A Series of Form Board and Performance Tests in Intelligence. By W. F. Dearborn, E. A. Shaw, and E. A. Lincoln. Cambridge, Mass.: Harvard Monographs in Education, Whole No. 4, Series 1, No. 4, September, 1923.

A Course in Arithmetic for the Elementary School. By Olive S. Tilton and Mabel L. Bridges. River Falls, Wis.: State Normal School, Quarterly Bulletin, Vol. V, Series II, No. 4, November, 1923.

A Course in Mathematics for the Junior High School. By Olive S. Tilton. River Falls, Wis.: State Normal School, Quarterly Bulletin, Vol. IV, Series II, No. 4. November, 1922. Sent free upon application to H. A. Davee, Director of Training School.

The Financing of Education in the State of New York. By George D. Strayer and Robert M. Haig, under the auspices of the American Council on Education. New York: Macmillan Co., 1923.

Exercise Book for Self-Proving Business Arithmetic. By Thomas T. Goff. New York: Macmillan Co., 1923.

U. S. Department of Labor, Children's Bureau Publications, 1923: No. 93, *Child Labor — Outlines for Study.* No. 106, *Child Labor and the Welfare of Children in an Anthracite Coal-Mining District.* No. 117, *The Welfare of Children in Bituminous Coal-Mining Communities in West Virginia,* by Nettie P. McGill. No. 118, *Standards of Public Aid to Children in Their Own Homes,* by Florence Nesbitt. No. 120, *Maternity and Infant Care in a Mountain County in Georgia,* by Glenn Steele. No. 121, *Juvenile-Court Standards.* No. 122, *Children of Preschool Age in Gary, Ind.* No. 123, *Child Labor on Maryland Truck Farms,* by Alice Channing. No. 125, *Unemployment and Child Welfare,* by Emma O. Lundberg. No. 126, *Minors in Automobile and Metal-Manufacturing Industries in Michigan.* No. 127, *Child Welfare in the Insular Possessions of the United States: Part I, Porto Rico,* by Helen V. Bary. No. 130, *Child Labor and the Work of Mothers on Norfolk Truck Farms.* No. 131, *State Commissions for the Study and Revision of Child-Welfare Laws,* by Emma O. Lundberg. *Ten Years' Work for Children,* by Grace Abbott; reprinted, by permission, from *North American Review* for August, 1923.

SUPERVISION OF THE SPECIAL SUBJECTS

With Special Application to the Supervision of Manual and Industrial Arts

By L. S. GREENE, M.S., *Supervisor of Industrial Education, Florida, Professor of Industrial Education, University of Florida*

SUPERVISION OF THE SPECIAL SUBJECTS is a text for use in colleges and normal schools for the better training of supervisors of the manual, industrial and domestic subjects. As a reference or professional reading book for those already in the field, it is unexcelled.

The book outlines the principles of supervising vocational, industrial arts and manual arts departments. It suggests special means for working out courses of study, for planning and conducting classroom and school shop supervision, for handling office work, for supervising purchases and deliveries of equipment and supplies.

Cloth, 162 pages ***Price, $1.75 net***

THE BRUCE PUBLISHING COMPANY

203 Montgomery Building **Milwaukee, Wisconsin**

Macmillan Books *on the* Project Method

Collings: **AN EXPERIMENT WITH A PROJECT CURRICULUM**

A study made to compare definitely results obtained by the project method with results obtained by standard curriculum methods. $2.40

Bonser: **THE ELEMENTARY SCHOOL CURRICULUM**

Outlining a constructive revision of the elementary school curriculum on a basis of the activities and needs of child life. $1.80

Stevenson: **THE PROJECT METHOD OF TEACHING**

A definition of the project method, and its application in classroom teaching. $1.80

McMurry: **TEACHING BY PROJECTS**

A discussion of three ways in which the project will render the best service to the cause of education. $1.60

Charters: **CURRICULUM CONSTRUCTION**

A comprehensive study of old and new methods developing fundamental principles of curriculum construction. Also contains a number of significant studies made in recent years. $2.00

Write for further information

THE MACMILLAN COMPANY

NEW YORK BOSTON CHICAGO DALLAS ATLANTA SAN FRANCISCO